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HOW CHINESE MANUFACTURING SMEs IMPLEMENT BPR

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DBA

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HOW CHINESE MANUFACTURING SMEs IMPLEMENT BPR

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Abstract

The contribution of SMEs is extremely important to the economy in China, so how can they improve their competition and enhance their innovation capability, which is a serious problem for them to consider? Owing to global business development influence, Chinese SMEs need to know Western management theories in order to recognise the difference between theory in the West and practice in the East and how these theories guide them in business management. In particular, business process re-engineering (BPR) theory is significant to Chinese SMEs redesign, restructure, and re-engineering of their enterprise in order to improve productivity and effectively enhance competition. So the ultimate aim of this research is to help Chinese SMEs to realise the existing problems when implementing BPR and help them flexibly use BPR theory in practice.

To achieve this aim the research is based on an empirical study to present evidence on the current status of BPR used among Chinese SMEs and to show the problems that influence their adoption and utilisation of BPR theory in business management. In addition, a framework is proposed with identified aspects that improve BPR implementation in Chinese SMEs. In order to achieve these objectives the research shows six cases providing an in-depth description of how Chinese SMEs understand BPR theory and use re-engineering concept to improve their business operations.

The case study results show that leader improvement, national culture, and

government policy factors influence Chinese SMEs' adopting and utilising BPR theory. These factors are used to develop a framework especially for SMEs use in Chinese cultural society. Implementation of BPR, in SMEs, is not widely discussed. Thus the study has important implications for research and practice; the limitations of the research; the contributions both in academia and practice; and the reflection of the research and future research, all of which are discussed.

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Glossary of Terms

BPR	Business process re-engineering
ERP	Enterprise resource planning
IT	Information technology
ITS	Information technical system
MPP	Mid point progression
SMEs	Small medium-sized enterprises
TQM	Total quality management

Chinese

Guanxi	The general sense of guanxi means relationship; it represents a way to bypass regulations, laws, or norms through personal connections with people who control limited resources.
Xiao	Filial piety
Yuan	Chinese currency (100 *Yuan* ≈ 6.55 £ 100 *Yuan* ≈ 12.9 $)
Zhong	Loyalty

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Declarations

I certify that this thesis has been composed by myself and has not been submitted in any previous application for any degree other than that of Doctor of Business Administration of the University Northumbria. The work in this thesis has been undertaken by myself except where otherwise stated.

Name

Signature

Date

Chapter One Introduction

Introduction

Business process re-engineering (BPR) has been receiving attention from the academic community as well as in practice since the beginning of the 1990s. It changes management practice and business processes in order to achieve the flexibility and efficiency necessary to deal with actual business operation; it emphasises processes redesign in order to accept the challenge of competitive threats in international and domestic markets. These threats are mainly changes in customer expectation, global competition and changes of identity; Hammer and Champy (2001) call these three Cs: customers, competition, and change which stand as a driving force from the point of view of explaining why BPR is necessary.

1.1 The necessity of BPR

Customers take charge

The mass market has broken into pieces there are no longer mass customers. The majority of them seek individuality; they are looking for a unique product and particular services. However, if mass production provides high quality, lower price, varied selection and satisfactory service, it will still have a certain market. Nowadays, technology plays a decisive role in service trade; it gives not only easily accessible databases about customers but also their preferences and requirements; it impels consumers to expect and demand more. Therefore, customers change their relationships with sellers; they can choose a product and compare the price around

the country through the Internet challenging the overall product process chain.

Competition intensifies

There are many different kinds of competition in existence nowadays. A variety of competition means are utilised by competitors in a market with trade barriers falling. There is intense competition in similar markets for companies around the world; also the lowest price, the highest quality, and the best service become the standard for all competitors. Big is not better, every company should realise its own capability and needs to keep a lookout for new starts. Technology changes the nature of competition, for example in retailing it has allowed manufacturers and retailers to merge their distribution and inventory systems in order to gain mutual benefits.

Change becomes constant

Now it is the norm that change has become both pervasive and persistent. The rapidity of technological change reduces product and service life cycles, but also makes the time available to develop and introduce new products, so companies must move fast. On the other hand, they need more environmental scanning, and to keep the sense of market change, in order to avoid losing expectations. However, the changes are the source and opportunity for companies in today's business environment.

The three Cs have created a new world for business, however it is increasingly

apparent that organisations designed to operate in one environment cannot be made to work well in another, because customers, competition and change demand flexibility and a quick response, therefore companies need to seek fundamental rethinking and radical redesign of the business process in order to adapt to the fast changing market. It is as simple and as formidable that companies have to look at how they have their work carried out and how to work better. BPR is the way from basic process taking as the point of departure to improve dramatically the business performance and development of an organisation.

BPR changes not just the improvement of parts by applying the individual strategies; it is for the whole business. This research advises that changing business means changing people and culture, especially when BPR is utilised by SMEs in a different culture society. How to get employees to understand re-engineering needs, how to encourage owners and leaders in implementing BPR in order to change further organisational culture have been the issues in Chinese SMEs when they carry out re-engineering or other reform projects. Therefore this research investigates the problems existing in Chinese manufacturing SMEs implementing BPR as well as seeking the means to solve these problems and develop the framework that is suitable for utilisation in practice.

1.2 Background of research

1.2.1 Origins of motivation

The original idea comes from maintaining organisation development and sought for radical change with SMEs in order to gain a competitive advantage, which is a strategy or philosophy for organisation advancement. The author has worked in a small company that deals with many SMEs; and was interested in redesign, restructure, and re-engineering. How do they bring dramatic change for the organisation development and what is the applicable way for SMEs continued progress?

As a result, the author carried out a literature review on BPR and utilisation experiences, discovering that many theoretical issues were still ambiguous. Specifically, the existing BPR frameworks applied in the SMEs and the concept of combination practice, in which there still exists a big gap in utilisation in the different cultures of society (Loh, 1997; Martinsons and Hempel, 1998). From the author knowledge up to the present time no one has carried out similar research. Therefore the author decided to undertake this research to focus on the problems of BPR implementation in the Chinese manufacturing SMEs.

1.2.2 Chinese SMEs background

Chinese SMEs are a rapid development; it has grown to become an important force in contributing towards sustained and rapid economic growth (Anderson *et al.* 2003).

Chinese SMEs definition standards are quite complicated, they do not clearly limit the number of employees compared with Western. They have three standards: production capability; product equipment; fix assets (http://manxia.blogchain.com/ May 2005). In general, organisations with an annual turnover that is below fifty million *Yuan* (100 *Yuan* ≈ 6.55£; 100 *Yuan* ≈ 12.9$ http://www.back-of-China.com/cn/common/service.jsp Feb. 2007) are defined as small enterprises and those with an annual turnover between fifty and five hundred million *Yuan* belong to medium enterprises (http:///www.ccw.com.cn, May 2005). There is no clear demarcation about employees in different industries in China.

At present, the majority of state-owned enterprises have adopted BPR since the period of so-called "Readjust Industrial Structure". SMEs seek to increase their market share, meeting the needs of customers; in fact, they used BPR to redesign their process without being aware of it. Some of them used the same theory, but they call it "optimize recombination" or "readjust enterprise". So this research is a significant attempt to summarise how Chinese SMEs have applied BPR, and what problems SMEs have faced when they implemented BPR.

1.2.3 Current issue

Chinese SMEs are made up of four major parts, which include private enterprise, township and village enterprise, nongovernmental joint-stock enterprise and state-owned enterprise in China. Most of them shifted to private ownership since the

government carried out a "change ownership" policy. Therefore, many of the private owners whose quality standard, skill ability, education background, leadership competence etc. will directly affect how far the enterprise can go, also constitute a current issue. Hammer and Champy (1993, p.213) observe that "if re-engineering fails, no matter what the proximate cause, the underlying reason can invariably be traced to senior managers' inadequate understanding or leadership of the re-engineering effort". Hence, in the end the research will suggest how to build systems of training programmes for owner and leader levels.

Moreover, national culture plays an important role in organisational change, especially in attempting new management theories and methods of carrying out radical change in organisational development. Chinese culture emphasises 'harmony' as the guiding principle when deciding what kind of new management theories and methods it can accept. The culture of 'middle course' as the means is used during organisational changes especially when they deal with thorny problems. The 'loyalty' is emphasised by Chinese organisations, it is an invisible resource controlling how big a step an organisation can take. Therefore the national culture influence is the key issue for Chinese SMEs implanting re-engineering.

1.2.4 Contemporary academic work relating to this research

This research draws to a large extent on the ideas developed mainly by Davenport (1993), Hammer and Champy (1993) as well as others (Alter, 1990; Lowenthal, 1994); it inherits BPR utilisation experiences shifting to SMEs with more emphasis

on BPR theory practice. McAdam (2000) used case studies to investigate the critical success factors for successful reengineering implementation in SMEs. Chang and Powell (1998) employed empirical testing to develop a framework of BPR to assess its implementation in SMEs. Some researchers focus on comparing BPR utilisation in small and large enterprises (Raymond, *et al.*, 1998; Cameron and Braiden, 2004), others emphasise small firm innovation (Vossen, 1999; Gardenne, 1999), which is also related to organisational change and development.

Currently there are many scholars and practitioners who pay attention to BPR influence organisational learning and advancement (Vakola, 2000; O'Regan and Ghobadian, 2002; Vakola, 1999), and human resource thoroughly controls implementation BPR (Launonen and Kess, 2002; McCabe and Knights, 2000; Cakar, *et al.*, 2003). These ideas and opinions have served as a great source of inspiration for the author's research. Up to now, the progress in applying BPR from West to East has been slow. The author is interested in BPR utilisation, which is a valuable concept and useful tool for the organisations' development, therefore the author is carrying out this research and making an effort to consider the BPR practice in Eastern cultural society.

1.3 Difference between this study and past studies

This research is similar to a number of past studies on BPR implementation. However, it differs from past studies in that it considers both current BPR usage and the aspects (from cases analysis) that influence SMEs decision to adopt BPR in

Chinese culture society. Most past studies have failed to consider the national culture that influences adoption of BPR in SMEs. In fact, most of these studies have been exploratory in nature with little consideration of the aspects influencing adoption and also very little theory development has been reported in this area.

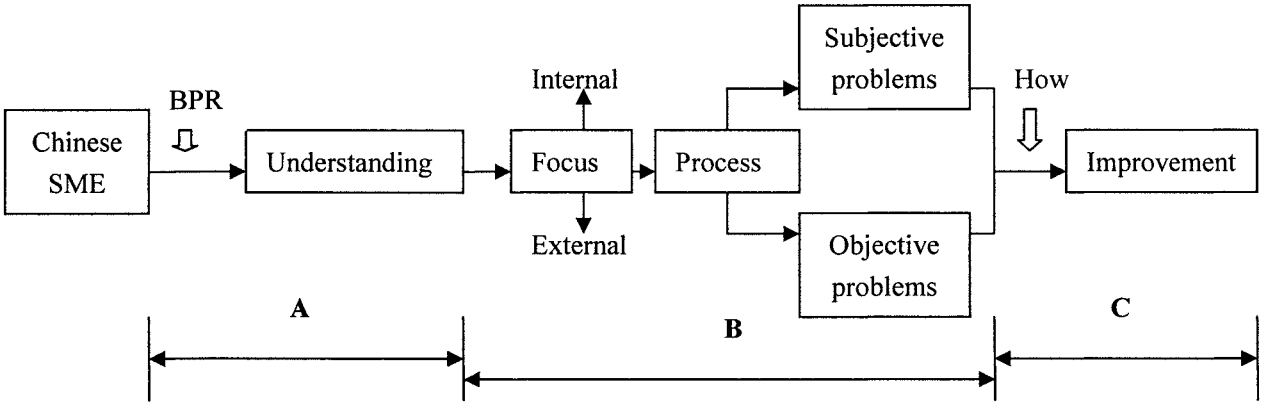
The study used interpretive case studies, which focused on human actions and interpretations surrounding the adoption and use of BPR in Chinese SMEs. The reason for adopting an interpretive approach for this study is that the way to understand a complex phenomenon like BPR is to adopt and utilise that which is concerned with considering national culture and influencing people's understanding, adoption and operation. The interpretivist researcher allows constructs to emerge whilst in the field, learning and trying to understand the phenomenon to interpret and make sense of the complex and dynamic nature of BPR utilisation in Chinese SMEs.

1.4 Research aim and objectives

The main aim of this research is to explore problems of implementing BPR in Chinese SMEs in order to help them solve these problems. The data was collected over a three-month period, between August and October 2005. The objectives of the study are:

- To understand the existing BPR initiatives in Chinese manufacturing SMEs
- To explore the problems related to implementation of BPR in Chinese SMEs
- To propose a framework with identified aspects that improve BPR implementation in Chinese manufacturing SMEs

In order to understand fully BPR adoption in Chinese SMEs and contribute to the cumulative body of research in the practice of BPR, the researcher provides a framework of research process to design interview questions and collect data. The author's research framework is as follows



A – Research objective one (understand the existing BPR)

B – Research objective two (problems of implementation)

C – Research objective three (framework with identified aspects)

Figure 1.1 The author's research framework

In order to fulfill this research objective, especially the data-gathering process, the following research questions play a guiding effect.

(1) How do Chinese SMEs understand process re-engineering (from a number of enterprises) in which they attempt to apply re-engineering or why have they alternatively refused to use BPR?

(2) How do they utilise BPR theory in order to explore the reliability and scope of BPR as a concept for these companies?

(3) What problems do they face when they implement re-engineering?

(4) How do they solve these problems?

The adoption and use of BPR in Chinese SMEs has not received prior attention. The

study is carried out using multiple case studies. The aim is to gain a deeper insight into the issues raised in practice and to understand the factors that influence Chinese SMEs' decision to adopt and use BPR in organisation development. It is also used to explain and conceptualise the phenomenon of BPR usage and to add a richer context from different cultures' societies.

1.5 Outline of the thesis

The thesis is organised into seven chapters. The rest of this chapter introduces why BPR is a necessary organisational development, and briefly describes the research background which includes the origins of motivation for this study, Chinese SMEs definition and the current issue of BPR implementation, followed by an examination of the difference between this study and past studies. Finally, the chapter presents the research aim and objectives, and the framework for data collecting.

Chapter Two provides BPR theoretical perspectives in explaining BPR definition, principle, arguments, BPR within TQM, factors influencing and BPR framework utilisation in SMEs. A description of the research methodology with reasons for the choice of a qualitative approach and limitations of case study are given. Then the description of generalisation, validity and reliability in case study research is presented, followed by a discussion of the case study design, data collection and analysis in Chapter Three.

Chapter Four examines the practitioners' understanding and interpretation of BPR utilisation in practice as well as defining each case analysis in which BPR has been used in Chinese cultural society. Chapter Five discusses cross case analysis which is based on seven main aspects with the existing literature, and described using an holistic content method.

Chapter Six starts with synthesis and discussion of research findings; and then the current stage of Chinese SMEs implementing BPR is described. A framework basis from empirical findings is explained in detail. Finally, implications of research findings and limitations of this research are considered. Chapter Seven emphasises practical contributions and reflection of this research is also discussed. After that further research and a conclusion are provided. The next chapter focuses on literature review in order to lay a foundation for this research.

Chapter Two Literature Review

Introduction

The business process re-engineering (BPR) concept has been receiving attention from management practices and working processes in recent years and in many countries (Belmiro and Rentes, 2000). Both BPR implementations and investigations have been taken into new realms which were utilised from factories, warehouses and back offices to product development, sales, marketing, even in the front office (Hammer and Champy, 2001), and in the academic community, which has tended to focus on the "technology push" aspects (Maull, Tranfield and Maull, 2003).

For instance, there are many articles discussing enterprise resource planning utilisation combined with BPR (Soliman and Youseff, 1998; Martin and Cheung, 2000; Al-Mashari and Zairi, 2000a, b) or consideration being given to strong organisational change and the human factor perspective (McAdam and Donaghy 1999; Zucchi and Edwards, 2000; Bright, 1999).

However, BPR still exists in some vague and problematic way either in implementation or in a theoretical view. In this chapter the author, through analysis of BPR definition, endeavours to understand the different focuses of each standpoint, and then explains BPR key concepts in order to realise basic a perception of BPR and grasp related elements and how they affect BPR utilisation. In particular, the author highlights some major arguments in the literature of BPR. These arguments include the description of the business process and BPR, the range of the changes and the

changes focus involved in BPR, and the significance of information technology (IT) playing a role in BPR.

Moreover, the author states that total quality management (TQM) differences and relations combined with BPR in order to know how they integrate with each other. Besides, the author is interested in factors that influence BPR utilisation. It is important to understand the reason for success or failure when enterprises carry out BPR, so that the participants can gain general experience, to avoid making mistakes and to give deep consideration to different situations in order to have flexibility when using BPR. These factors embody culture, technology and human resource influence. And then BPR framework implementation in SMEs will be introduced, through an explained framework, which the author believes to be more appropriate for utilisation by SMEs. The reader will gain a brief idea of to what SMEs should pay attention when they implement BPR.

2.1 What is BPR?

There is a variety of names that have been used to describe BPR, such as 'core process redesign' (Heygate, 1993; Rigby, 1993; Kaplan and Murdock, 1991), 'process innovation' (Davenport, 1993), 'business process redesign' (Davenport and Short, 1990), 'organisational re-engineering' (Lowenthal, 1994) and 'business restructuring' (Talwar, 1993) etc. All of them imply the same concept, which focuses on change to inappropriate process and structure, in order to reduce unnecessary waste, improve efficiency and gain competitiveness.

Sherwood-Smith (1994) states that BPR aim is 'seeking to devise new ways of organising tasks, organising people and redesigning IT systems in order to meet the needs of fierce business competition and to achieve the organisations' goals'. In this section the author attempts to explore BPR in different ways with different emphases and a brief explanation of the concepts.

2.1.1 The definition of BPR

There are some arguments in which advocates of BPR are more vague and its methodology of change is quite opaque, as a result, no one knows exactly what it is (Oliver, 1993; Van Meel *et al.*, 1994; Peltu *et al.*, 1996; MacIntosh and Francis, 1997). This situation makes BPR difficult to assess the overall success or failure of its concept, on the other hand, which also makes BPR mysterious for an infinite future. However, certain contours are comparatively well defined and accepted by

most researchers and academia. The following definitions show a different view to understand BPR:

... ***the fundamental rethinking and radical redesign*** *of business processes to achieve* ***dramatic improvements*** *in critical, contemporary measures of performance, such as cost, quality, service, and speed* (Hammer and Champy, 1993, p.32).

... ***is only part of what is necessary in the radical change of processes****; it refers explicitly to the design of the new process. The term process innovation encompasses the envisioning of new work strategies, the actual process design activity, and the implementation of the change in all its complex technological, human, and organisational dimensions* (Davenport, 1993, p.2).

... *a methodical process that uses information technology to radically overhaul business process and thereby* ***attain major business goals*** (Alter, 1990, p.32).

... *The fundamental rethinking and redesign of operating processes and organisational structure,* ***focused on the organisation's core competencies****, to achieve dramatic improvement in organisational performance* (Lowenthal, 1994, p.62).

BPR focus on business processes

BPR core concept should concentrate on process rather than function, product or

service. Hammer and Champy (1993) define a process as "a collection of activities that takes one or more kinds of input and creates an output that is of value to the customer" (p.35). Similarly, Davenport (1993) defines it as "a specific ordering of work activities across time and space, with a beginning, an end, and clearly identified inputs and outputs: a structure for action" (p.5).

After reengineering, the process is also called business process in BPR. Davenport and Short (1990, p.12) describe business process as "a set of logically-related tasks performed to achieve a defined business outcome". And Hinterhuber (1995, p.65) explains the business process as "a set of integrated and co-ordinated activities required for producing products or offering services". Riemer (1998) points out that business process in an object-oriented style, which is a series of steps to change states in order to achieve business objects. As a result, process orientation can help organisation elimination of functional bias to gain substantial business improvement (Andreu *et al.*, 1997).

Business process includes structure, inputs, outputs, customers and owners (Davenport and Short, 1990; Hinterhuber, 1995) that integrate fragmentary functions to operate an internal and external smooth flow (Hammer, 1990). According to Willcocks and Smith (1994), business processes can be classified into four groups: core business operations, support, management and business network processes.

Idea of radicalness

Many researchers tend to agree that BPR includes radical and fundamental changes in order to achieve dramatic improvements. BPR has long-established ways of doing business, which mostly focus on customers, services and products. The emphasis has now been shifted to concentrating on improving quality, the customer and innovation rather than emphasising control and cost cutting (Hammer, 1990). As a result, organisations consider change to old business processes by introducing new concepts and methods of managing business in order to carry out revolutionary changes to meet today's competitive environment.

Using IT

Most practitioners and scholars realise IT to be a major tool to support and enable BPR implementation (Hammer, 1990; Grover *et al.*, 1993; Davenport, 1993; Jones, 1994; McDonald, 1993; Hammer and Champy, 1993; Venkatraman, 1993; Davenport and Short, 1990; and Tapscott and Caston, 1993). IT reforms the business process, which can facilitate the flow of information, and ensures that instantaneous and consistent information can be available (Tapscott and Caston, 1993; Klenke, 1994). The relationship between IT capabilities and BPR has a mutual effect like a recurring loop in which each develops the other (Davenport and Short, 1990). The greatest advantage of using IT is to create new effective business process rather than automating outdated functions (Hammer, 1990; Venkatraman, 1993).

Organisational change

Al-Mashari and Zairi (1999) mention that successful BPR implementation requires fundamental organisational change in terms of organisational structure, culture and management processes. They advocate that one of the key factors in BPR within organisation is the cultural adjustment, with design processes and structures into working practice and establishment of a culture that makes staff more responsible and accountable. As a result, "organisations are more flexible and responsive to customers, efficient and cost-effective" (Knights and McCabe, 1998, p.164). There are four types of organisational change, which include process, structure, culture and political change as suggested by Cao *et al.* (1999), which will be explained and discussed later on.

2.1.2 BPR Principle

Obolensky (1994) states that all organisations have three main component parts processes, people and technology. These three elements have to cooperate and regulate to the needs of the market and the customers. The processes of the firm must be identified and be assigned first, and then consideration given to the people who will operate the processes. People can well accomplish processes depending upon the level of skill, knowledge and motivation. The third element of technology is used to support the processes and people; it includes the office and factory technology from all types of files to computers.

Hunt (1996) addresses that **process** has to focus on three aspects: business enterprise

goals, customers' requirements and benchmarking information. Blacker (1995) considers key processes which directly add value and delivery to the customer; it may be an actual customer or the internal customer. Support processes that enable the key processes to run smoothly, are a new role with some functional departments such as quality and finance to retain expertise.

Love, Gunasekaran and Li (1998) suggest that process includes technical dimension and social dimension. The technical dimension of process relates to technology, standards, procedures and controls. Some management techniques can be used to design this type of process (Manganelli and Klein, 1994), such as:

- *Workflow analysis*, which link between processes to identify opportunities for integration improving coordination and redefining responsibilities etc.
- *Information engineering*, which emphasises where and how to apply technology as an enabler.
- *Performance measurement*, which utilises techniques to assist management in identifying locations for process controls and measures for management performance.
- *Strategic automation*, which has great potential for implementing technology in construction, such as, managing information, storing data, etc.
- *Change management*, which is identified and effectively communicated throughout the organisation to all employees.

The social dimensions of a process include organisation, staffing, jobs, career paths and employee incentives, together with the technical design problems relating to recruitment, education, training, re-organisation and re-deployment, which can be

addressed through social inputs. Manganelli and Klein (1994) state that some management techniques can be used to design the social dimension of a process. These include:

- *Employee empowerment*, which defines the responsibilities, particularly decision making, that can be re-deployed to the level of the employees so that they able to perform the job effectively.
- *Self-managed and cross-functional teams*, which can be implemented as structural enablers (Love and Gunasekaran, 1997), this structure being adopted to encourage motivation, so that managing work teams direct their own work without a formal leader.
- *Organisational re-design and mapping*, which re-draw and re-define the organisation, which is appropriate to the management and operation of the process.
- *Job production*, which determine the skill and training needs of each newly defined position.
- *Employee rewards and incentives*, which eliminate barriers to change and retain key employee expertise through the transitional stages of the process.

People resources are crucial to the success of the re-engineering project, they design any set of processes and perform the tasks. A key element to think about is how best to utilise human resources in the organisation. Morris and Brandon (1994) noted that the people should pay attention from the beginning of the project, in order to make the process effective, efficient and adaptable. Strategy culture, organisation, reward, empowerment, recruitment and development should always be aligned to adapt to new circumstances.

Armistead and Rowland (1996) observe that changes in the style and competencies of top management are clearly essential to the success of the improvement of BPR programmes. The principles of BPR suggest integration of activities which can lead to the formation of teams, such as customer order, installation of equipment, customer service and so on. The framework (Figure2.1) describes the organisation cultures in terms of six components and a central paradigm, which describes the value of the organisation.

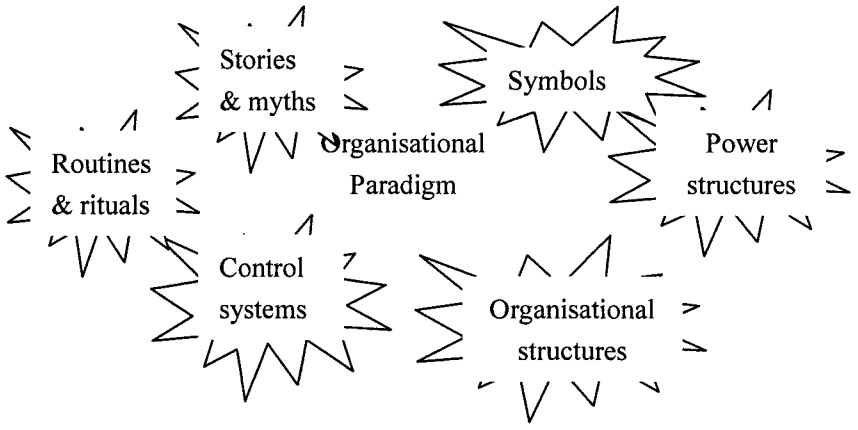


Figure 2.1 A cultural web

Source: Armistead and Rowland, 1996, p.40

The cultural web helps to identify different respects of an organisation's culture that will suit both values and behaviour. It helps managers to recognise necessary actions in different areas in order to improve programmes that can be fitted to cover all the aspects where change is needed.

In order to reduce human resistance to BPR, Marjanovic (2000) suggests the following strategies should be implemented.

- Employees' attitudes should be identified when the firm carries out reengineering projects, and the reasons for resistance should be assessed.
- BPR threats should be recognised, and open communication is the critical way to reduce the level of anxiety and insecurity.
- Employees should understand the need for change and expected benefits from BPR.
- Employees' participation in the reengineering process is very important; they may best understand the problems of the existing processes and give some suggestions for further improvement.
- Communication and committed building should occur at all organisational levels; therefore managers will through deep and extending vision understand the attitudes and behaviour of different levels of workers.

It is clear that managers should resolve any points of conflict and employees' lack of cooperation as early as possible.

Technology in its widest sense can be thought of as all facilities, tools, machines and materials that are used by a firm. It focuses on information technology, which is the most significant technological advance to impact on society and business, especially when utilised in BPR programmes.

IT organisation has included educating members of the re-engineering team about master information technology and how it can be appropriately applied to business processes, selection and use of business process and data modeling tools (Meirs, 1994; Parnisto, 1995), indeed to build the systems that are expected by the re-engineering team, it helps the organisation in its move toward a culture of IT

enhanced cross-functional teams coming together to solve problems and implement solutions (Obolensky, 1994; Marjanovic, 2000). Recently, IT has contributed benefits in BPR further facilitated with enterprise resource planning (ERP) systems and e-commerce applications (Hammer, 2000; Kustermann, 1998).

IT applications are suggested to gain strategic advantage and develop long-term technological competency, as a result, many firms have seen a major motivation for new IT investment when they are redesigning key business processes. Clearly, IT plays a critical role in achieving BPR in physical flow and information flow (Lee, 2004) to remove space and time barriers and lower information processing cost.

On the other hand, technology emerging in BPR is self-contradictory. First, technology utilisation to require organisation transformation and organisational change is also determined by the nature of that technology. But, this transformation can be effected in essence by the management. Second, technology is seen to solve problems, but BPR also casts technology as the problem to be solved (Grey and Mitev, 1995), therefore the re-engineering initiative should not depend on the IT organisation (Edwards and Pappard, 1994).

2.2 BPR arguments

BPR has variations in the vocabulary used in the literature, which has blurred the meaning of re-engineering and a high level of misunderstanding and misinterpretation has been identified by Belmiro, *et al.* (1997) through their research.

Owing to the lack of a standard vocabulary, the writers fail to agree whether BPR is a theory, a philosophy or a technique. The process is already defined and creating too many new and different words and phrases, which causes many practitioners to miss the essence of BPR.

On the other hand, different management consultants used BPR as a way to sell their own proprietary methods in the early days (Francis & MacIntosh, 1997; Grover & Malhotra, 1997), a lack of theoretical basis inevitably gives rise to confusions and contradictions for the user. The original literature of BPR was essentially anecdotal and lacked serious and rigorous research to support its assertions (Deakins & Makgill, 1997; Tinaikar *et al.*, 1995). Perhaps BPR is between 'creating something new' in the practice area and 'slightly changing the existing worlds' in the academic region (Belmiro *et al.*, 1997). The following debates have been summarised:

Radical vs. incremental

Hammer and Champy (1993) highlight BPR as a 'radical change and dramatic improvement', they consider that re-engineering is a new beginning which "rejects the conventional wisdom" and becomes "a visionary, a motivator and a leg breaker" in order to succeed (p.49). Similarly, Davenport (1993) advocates that radical change is "the only means of obtaining the order-of-magnitude improvements necessary in today's global marketplace" (p.1). Vidgen *et al.*, (1994) emphasise radical change "to avoid being trapped by the way things are currently done", and Robinson (1994) points out those radical re-visioned processes of the organisation to seek for suitable

change rather than current structures. At the same time, radical change is not limited to inside organisations but forges with other organisations (Vidgen *et al.*, 1994). This view makes the organisation a fluid mix of interests rather than a fixed entity with an objective existence.

However, Grey and Mitev (1995) state that BPR is "not so radical as it claims" (p.7). Some researchers tend more to support an incremental view (Stoddard & Jarvenpaa, 1995; Cock & Hipkin, 1997), the dimensions of change in a piecemeal fashion over an extended period, the overall effect more akin to an incremental process. Currie and Willcocks (1996) note that BPR can provide a valuable level for change but must be managed carefully, and it is not surprising that many BPR initiatives fail to achieve dramatic improvements in performance. Several reports support the above idea but are concerned with the observation that truly radical change has been rare (Grint *et al.*, 1996; Maglitta, 1995; Robey *et al.*, 1995).

Even Hammer and Champy have both admitted that BPR has not been implemented in the radical manner which they had originally intended (Champy, 1995; Hammer and Stanton, 1995). Hammer (1996) recognises his original mistake in asserting that the keyword of the re-engineering concept was 'radical' and now asserts that the most important word in the definition is 'process'. The author agrees with Kotter's (1995) opinion, which is a difficulty of implementing radical change in practice, owing to cultural differences influencing understanding, behaviour and management

in different regions.

Clean slate vs. existing process

Hammer & Champy (1993) state that BPR has a 'throw-it-all-out-and-start-again' flavour. The clean-slate approach disregards existing structures and procedures in order to design new ways to accomplish work. The clean-slate approach may spend little time considering current practices.

However, this approach seems fallacious because the most radically redesigned business processes need to be implemented in real organisations and these organisations have their own histories and memories (Boudreau & Robey, 1996). Re-engineering teams cannot wipe clean the slates that members of the organisation who share understandings and mental models have accrued over time. It is not logical and is difficult to carry out in practice, which obliterating existing processes and beginning anew with a blank slate imposes, and also cannot meet BPR's claims of effectiveness. The blank slate too often implies a "blank cheque", especially when organisations advocate utilising advanced IT (Davenport & Stoddard, 1994; p.123). As a result, few organisations seem prepared to finance the mass migration towards an unproven future.

Thus, the middle way of process redesign can proceed using a blank slate, but that process implementation must acknowledge existing processes, recent case studies show that this manner is accepted by organisations (Stoddard & Jarvenpaa, 1995).

The author approves of using a middle way and integrating actual situations to analyse the existing process and then redesign it. Owing to cultural differences in Asia, the author suggests giving careful consideration to radical change and suggests this be implemented gradually.

IT enabler vs. disabler

Both Hammer (1990) and Davenport & Short (1990) stress that information technology is a key enabler of process redesign. Most other BPR proponents also adopt the view that information technology basically drives the re-engineering effort (Grey & Mitev, 1995; Jones, 1994). These arguments acknowledge that technology determines not only work structure, but also organisational structure, culture, management styles and beliefs (Grey & Mitev, 1995). Thus, organisational redesigns through advanced enabling technologies support new business processes.

On the other hand, information technology can also disable an organisation's ability to change. When organisations revise their basic business processes using information technology, because the technical backbone of automated processes exists as software routines, a later change will require a reconstruction of the software application and its various links to other systems, which makes it more difficult to change in the future. Lucas and Olson (1994) argue that technology provides the capability for a more flexible organisational structure, which allows greater variety in the time and place of work thus increasing the speed of response. On the other hand, they note that information technology also constrains flexibility

by insetting routines into software programs, which are not easy to change.

Emerging research evidence supports another perspective, in which information technology is an 'enabler' and a 'creator of opportunities'. Coombs & Hull (1995), Galliers & Baker (1995) and Guha *et al.*, (1997) argue that BPR is possible without IT as central support. The author tends to agree that IT as a tool can be flexibly used in different aspects; however, BPR does not need to be necessarily dependent on IT or be controlled by IT.

Top-down vs. bottom-up

Willmott and Wray-Bliss (1996) argue that re-engineering is a top-down philosophy of organisational change in which experts redesign the process and expect employees to operate. Objectively, the widespread use of information technologies to enable process change increases the surveillance to the employees. It not only through hierarchical monitoring or the internalisation of control through processes of self-discipline and peer monitoring, but also in re-engineering methods proposed to instill employees and coerce manipulation of attitudes and beliefs to secure cultural conformity (Boudreau & Robey, 1996).

However, this is the opposite to re-engineering's claim to give power to employees, re-engineering empowers workers with greater access to information, enhanced knowledge, and the freedom to perform their jobs. The other obvious paradox is employee commitment to radical organisational change. The widely acknowledged

need to obtain the commitment and positive attitude of most individuals in organisations towards BPR appears to be the necessary condition for project success. The literature also emphasises the importance of commitment that needs the support of top managers.

On the other hand, BPR is often a threatening proposition for members of an organisation, which can affect people's jobs, including the way they are evaluated, rewarded and supervised, so that re-engineering can withhold their commitment to change efforts. When confronted with the personal sacrifice of participating, most employees are unlikely to sustain their commitment to BPR efforts. Though the above description shows that BPR theory and practice still exist with differences and contradictions, the question is how to coordinate both divergences which is really important and affects end results. As a result, the author agrees with Melao & Pidd's (2000) opinion that contends commitment, ownership and initiative from the front line are vital for many successful BPR programmes.

There are some other debates, which are still significant in helping user wide understanding of BPR, such as **novel vs. established controversy**, Hammer & Champy (1993) define BPR concept as 'a new business model', which is different compared with previous appearance improvement programmes. On the contrary, some writers have argued that BPR lacks real novelty; it just links together existing approaches in a novel way (Biazzo, 1998; Earl & Khan, 1994; Jones, 1995; Peppard

& Preece, 1995), it can be said to be ladling old wine into new bottles (Willmott, 1994).

Broad vs. narrow, the original idea of BPR was usually redesigning cross-functional business processes. However, researchers found that BPR within a single function can also provide significant improvements at the same time, causing fewer demands and risks (Stoddard & Jarvenpaa, 1995; Zairi & Sinclair, 1995). The author tends to agree with a narrowed down BPR range in practice, especially when SMEs implement re-engineering, which should consider resources and make amends for their weaknesses by exploiting their strengths.

Inspiration vs. methodology, Hammer and Champy (1993) believed that BPR depends largely on imagination, creativity and experience, which 'cannot be planned meticulously'. As time goes on, the BPR issue has been introduced systematically by various methodologies and modeling tools utilisation (Kettinger *et al.*, 1997). The author tends to accept both ideas and approves of being flexible in different situations.

Melao & Pidd (2000) agreed that in these debates it can be seen that the original concept of BPR is itself being re-engineered to take a broad perspective. The author strongly suggests that organisations do not rigidly adhere to formalisation of BPR. They should both deeply and widely understand the concept of re-engineering, and

then analyse their problems and integrate overall resources in order to find a way of implementation, which is suited to their organisation. The summary of Chinese SMEs tends towards support BPR arguments in Table 2.1.

Arguments	Choice	Reasons
Radical	Less consideration	
Incremental	More choice	Culture influence
Clean slate	Impossible consideration	
Existing process	Choice	Culture influence
IT enabler	Majority agreement	
IT disabler	Less agreement	Practice requirement
Top-down	Choice	
Bottom-up	Impossible consideration	Culture influence
Novel	Not consideration	
Establish controversy	Choice	Culture influence
Broad	Not consideration	
Narrow	Choice	Capability influence
Inspiration		
Methodology	Can be both choice	Practice requirement

Table 2.1 Chinese SMEs' trend of BPR arguments
Source: Author

2.3 BPR and TQM relationship

BPR and TQM have countless ties in practice. Considering Chinese SMEs actual situation and standard, it is necessary briefly to introduce Total Quality Management (TQM) features and the difference compared with BPR in order to help in general understanding of the complicated relationship with each other. On the other hand, based on practical experience some scholars and practitioners suggest that BPR and TQM can be integrated in utilisation; this view is useful to Chinese SMEs adopting BPR theory without feeling completely in the dark. Therefore the three main points

discussed in this section are as follows.

2.3.1 BPR within TQM

Business process re-engineering (BPR) seeks for radical changes in organisational processes in order to gain advantage from the advances in information technology. TQM is based on a broad organisational improvement, which make continuous quality enhancements in products and services for the customer. While both seem to be completely opposite approaches, BPR causes qualitative change and TQM addresses quantitative change (Dey, 1999). Because of change contents are different, BPR seeks to change processes in order to make organisational efficiency, and it shows 'hard' philosophy with its roots in scientific management. TQM seeks to change people's attitude and build organisational effectiveness, it displays a 'soft' philosophy with its roots in human resource management (Morgan and College, 1995).

However, many other authors have suggested that BPR and TQM are not mutually exclusive (Yeo, 1996), both of them emphasised customer focus, teamwork and empowerment. Many scholars and practitioners noted from the work and research that BPR and TQM have several similar characteristics (Harrison & Pratt, 1993; Janson, 1992; Hammer & Champy, 1993; Davenport, 1993; Guha *et al.*, 1993; Talwar, 1993; Klien, 1994; Zairi & Sinclair, 1995; Krieter, 1996; Lee & Assllani, 1997). Some of the main features shared with each other are as follows.

Quality improvement

The majority of managers accept that BPR efforts are directly or indirectly aimed at enhancing product and service quality in their organisations (Lee & Schniederjans, 1996). BPR uses its powerful reliance on information technology to track process effectiveness and support quality activities. Previous research has indicated that quality improvement is the easiest target to gain from using BPR (CSC Index, 1994). While innovation, speed and quality are three elements of BPR which advance competitive advantage (Valentine & Knights, 1998), resulting in quality improvement that is not only TQM-right but also fulfils BPR responsibility for the organisations' achievement.

Top management involvement

Top management support is a necessary condition for TQM's successful implementation. Customer satisfaction and quality improvement must be the fundamental business strategy, based on this strategic goal; the commitment and involvement of the organisation requires overall continuing change. BPR emphasises more top management support of a total commitment to focusing on an organisation's core competencies and seeking for processes change using advanced information technology, in order to reduce employees' resistance and enhance cooperation. The senior executives play a bridging role in coordinating every aspect.

Process improvement

Both BPR and TQM focus on processes change and shifting organisational thinking

away from function and departmental mentality. The important of BPR is a fresh look at the entire process and perception of possible information systems to provide and give a clear view of the requirements of the process. TQM uses feedback loops at every step of the process and an environment that encourages constant evaluation of results and individual efforts to improve.

Customer satisfaction

Customer satisfaction is a common expectation for both TQM and BPR. Both of them consider customer requirements and maintain a customer focus, which improves quality and fulfillment in achievement. While TQM is not just about meeting but also exceeding customer expectations, re-engineering achieves the goal depending on whether it is geared towards the customer. The TQM philosophy is based on trust to build a long-term relationship with customers, and the basis of BPR approach is core process framework if their core processes respond to a customer's need, they add value for the customer.

Organisation culture

The successful implementations of TQM and BPR approaches require the creation of an organisational culture, in order to give breadth and depth to accomplish significant and lasting improvements. They both necessitate moving towards cross-functional working, the process change must be integrated at each level of the organisation in terms of core values of the corporation functions. However, the change of culture is widely different when transforming traditional hierarchical command and control of

an organisation. For example, within BPR, the involvement and empowerment is led from the top, within which total involvement in TQM from everyone is essential.

2.3.2 Differences between TQM and BPR

The above discussion shows that similarities exist between TQM and BPR. However, it is also necessary to analyse significant differences between these two approaches, in order to understand them comprehensively and gain an objective conclusion.

Focus and Methodology

TQM focuses on continuously improving product and service quality; there is not necessarily a complete redesign of business processes and attention given to cost reduction. TQM uses numerous improvements and analysis methodologies, such as: quality circle, benchmarking, statistical quality control, etc. The Baldridge Award application makes an overall framework for product and service quality that has been adopted by many companies. The customer satisfaction category is the most heavily weighted, giving emphasis on customer-related activities of companies that adopt the framework and standards of the Baldridge Award.

BPR focuses on management, operating and administrative process redesign; there is no explicit focus on cost reduction. BPR is a process replacement activity done on a project basis; each process redesign is more or less independent of the others. Because many processes cross functional boundaries, the new process management and process information systems often restructure the organisation's hierarchy, and

flatten the task-performing structures of an organisation. There is no BPR framework and methodologies are developed well in Eastern cultural society. So each company appears to use its own analysis and implementation techniques to implement its own concept of BPR.

Effectiveness of the programs

TQM programs are the long-term pursuit of a quality improvement; sustained senior management leadership and continuous improvement are the elements of success. Gradual and adaptive changes are very important characteristics for TQM attaining competitive advantage. The benefits can accrue through relatively small but important continuous improvements in ordinary business processes. TQM programs require changes in the culture and values of an organisation and these changes are necessary for effective implementation. The culture and value build through what the customer wants and how to satisfy them. This culture and value transformation becomes pervasive throughout the company, which ensures TQM's successful completion.

The re-engineering process itself typically involves a short time duration compared with TQM. These short-term re-engineering processes help American Organisations to regain and remain competitive in the international market as well as in the domestic market (Lee and Asllani, 1997). BPR seeks radical change in product, service or technique in order to gain sustainable competitive advantage, which is achieved when competitors cannot easily duplicate the innovation. Owing to BPR

flexible focusing, this could take single core process or cross-function processes redesign, so the benefits come out directly and effectually. BPR also requires creation of the necessary organisational culture for radical change. Understanding and cooperation should be adopted by top management and throughout implementation.

Using information technology

TQM methodology barely deals with IT *per se*. Each company may use IT or not use IT in its own fashion to help improve quality and customer satisfaction. TQM's concept of continuous improvement implies that certain of the process improvements may be improvements of information systems that support the processes, and this may occur on a continuing basis. The systems development has been routinely followed in systems work under the name of systems maintenance. For example, Just-In-Time (JIT) approach is likely to be a consequence of a quality improvement activity and has implication for systems development. It often relies on an extensive electronic data interchange (EDI) information system, which must be designed, implemented and maintained as a part of TQM's continuous improvement activities.

The impetus is for companies' implementation of BPR and advances in IT capabilities. IT plays a major and essential role in BPR; it is the driving force for BPR projects or is an enabling force necessary for supporting some reengineered processes. Information technology acts as an enabler that allows organisations to do work in radically different ways (Hammer and Champy, 1993). Thus IT as an enabler for BPR characteristically provides two major insights. Firstly, most BPR projects

ultimately involve building entirely new information systems for each process; also the new information systems tend to be simpler than those they replace. Secondly, the occasion of designing an entirely new information system to support radically different processes does present the opportunity to search for new information technologies.

2.3.3 Integrating TQM and BPR

Many scholars (Cole, 1994; Kelada, 1996), consultants and managers have seen the advantages of the integration of TQM and BPR concepts into a programme for continuous process improvement. Because both concepts focus on customer satisfaction, process improvement, teamwork, quality, change, empowerment and efficiency, much of the language being used is common and many of the practical improvement tools being used are the same. Integrating can exploit the strengths of both concepts and eliminate the weaknesses associated with each of them. Table 2.2 summarises the major strengths and weaknesses of TQM and BPR (Jarrar and Aspinwall, 1999).

Some scholars and practitioners have taken these two approaches on board and have put forward a few suggestions. There are two categories that seem to exist.

(1) Using BPR as a tool within the framework of TQM, therefore BPR becomes a "continuous improvement activity that delivers a high rate of increased productivity and quality in a short time" (Kelada, 1996), and "TQM provides the essential cultural framework to enable BPR" (Macdonald, 1995).

(2) Integrating the strategies between continuous and radical improvements can

significantly increase the competitive advantage. Krieter (1996) suggests that 'use BPR to build a platform for a TQM programme, BPR can be used to change the company radically, and then TQM can be used to continuously improve the company effectively'.

	Strengths	Weaknesses
BPR	● Dramatic improvements (innovation) ● Relatively short time frame (quick results) ● Exploits IT capability ● Cross-functional nature ensures 'whole process optimisation' ● Measurable progress and results	● Top-down approach degenerates to command and control ● Massive layoffs (usually) ● Revolutionary nature of change can be very stressful and financially exhaustive ● Narrow scope focusing on business processes. Usually results in neglecting or undermining the people dimensions, e.g. reward, measurement, management, individual beliefs and organisational culture ● Operational process focus leads to reduced customer focus ● Focus on 'time and cost' savings leads to short/medium-term benefits and lack of strategic impact
TQM	● Bottom-up participative approach ● Broad scope covers all organisational aspects ● Results in stable culture of continuous improvement ● Evolutionary nature makes change easy to implement and reduces resistance	● Lack of strategic impact ● Long time frame ● May lead to sub optimisation ● Lack of innovativeness and radical change capability ● Difficult to measure progress ● Continuous incremental improvement mentality inhibits learning ● Lack of IT focus or utilisation

Table 2.2 Major strengths and weaknesses of TQM and BPR approaches

Source: Jarrar & Aspinwall, 1999, p.588

The synergy of the BPR-TQM combination builds strengths and eliminates weaknesses in the following way: (1) Owing to TQM's stable culture and

evolutionary nature, it will be used to reduce stress and fear by BPR's revolutionary nature. (2) Using IT is the driving force in the practices. (3) It helps organisations attain sustainable competitive advantage. After BPR implementation, the organisation needs to provide adequate time to its workforce to learn the new process and make incremental improvements and always be alert to a possible new re-engineering opportunity.

The synergy is a strategy and even a skill leading managers to consider the following suggestions (Lee and Asllani, 1997):

- Emphasise commitment to gradual improvement and consider BPR implementation only when necessary in the core competence areas.
- Customer orientation needs flexible improvement which is selected only by re-engineering.
- Think of symbiosis as a Just-In-Time philosophy, which means a radical improvement must be made when it is needed and the process that needs to be improved should be redesigned first.

Integrating TQM and BPR requires managers' vision, strategy and practice ability to lead dramatic organisational performance improvements.

2.4 Factors that influence BPR utilisation

There are many factors which influence BPR implementation; this research focuses on culture, IT and human resource, three aspects to start discussing. It is obvious that cultural influence plays an important role when Chinese SMEs carry out BPR. Along with faster Chinese economic development, IT is more regarded to be utilised widely

in SMEs, human resources management giving rise to attention in recent years. These factors are significant, affecting SMEs' successful implementation of BPR; it is also an important guide for this research focus. The detail is discussed below.

2.4.1 Cultural influence

Culture is often seen as an important factor affecting people's understanding, thinking and behaviour, and further influencing an organisation's strategy design; structure change and future development. The culture of Confucianism in China can be traced back to the Dynasty about 2000 years ago; it developed from the teachings of Confucius (551-479BC) and his disciples; it had a tremendous impact on how Chinese life had a great influence in Chinese government, education, and attitudes toward correct personal behaviour and individual duties to society.

Harmony is an essential feature of Confucianism and always been the core of Chinese philosophical thinking as well. These are also important components of management theory and practice in China through various dynasties expounding the dimensions of harmony and significance of fulfillment. Harmony emphasises that each member in society should be conscious of the requirements' role; failure to follow the role behaviour would break the balance and damage relationships and in the end would disrupt the harmony of society (Wright, 1962).

Bond and Hwang (1996) advocate that 'harmony – in – hierarchy' has been suggested as the key to understanding Chinese social behaviour. At least on the

surface, harmony means that dissatisfaction among the subordinates and conflict between cliques are unlikely to be brought into the open, therefore, the outside of a Chinese organisation may appear 'one large family', they are very sensitive to outside conflicts and usually tend to find some way to reconcile the inappropriate segments in an integrated framework (Yang, 1986).

Harmony highlights avoid direct confrontation and radical changes in order to remain organisationally stable and protect the 'face' from superiors to subordinates. Each class in society has a different face (Worm, 1997: 148), and 'face' is a key component in the dynamics of *guanxi* (Min, 2004). Therefore, when the organisation meets with a difficult situation and is forced to change, it tries to synthesise the constituent parts into a whole so that all parts blend into a harmonious relationship in order to reduce the possibilities of 'rocking the boat' (Moore, 1967).

Because of Chinese society relationships there is a tendency to hinder the solution of ongoing problem, what is called 'a slight movement in one part affecting the situation as a whole'. Therefore, the Chinese tend to make a detour in order to solve the puzzle and to avoid giving offence some officials hide behind *guanxi*. *Guanxi* refers to special relationships that can be translated as friendship with implications of a continual exchange of favours (Pye, 1982: 101). On the other hand, the Chinese character prefers to be cautious (Cheng, 1946; Tseng, 1973; Hsu, 1981) and submissiveness to authority. They never offend influential people who sing an opposite tune when they implement change in the organisation. Therefore,

theoretically, BPR visualising radical changes never happens in Chinese society.

In social and political terms, change was much less obvious in China in the 2000 years leading up to the twentieth century compared with the West (Porter, 1996). Unfortunately, when change came it was traumatic and inconclusive in the half century before 1949 and chaotic through the policy shifts and political campaigns since 1949 (Spence, 1990). Therefore, people fear change and tend to be more conservative and tend to put a restraint on their desires. When faced with difficulties they always invoked a golden mean, and seek to put things right by restoring the ideal past rather than by seeking out new solutions (De Bary *et al.*, 1964).

Moreover, Confucianism emphasises 'filial piety' (*Xiao*) and 'loyalty' (*Zhong*) in order to present harmonious co-existence among people. *Xiao* governs relationships within the family by which children respect, obey, support and care for their parents, it displays listening experiences and solicits opinions when young people face problems or are in a new situation. On the other hand, if they have an opposing view when they argue, the young people should submit to the view of the majority which gives 'face' to the old people in order to protect their dignity.

When the young make decisions they must respect the old people, at least on the surface, even if they think the old people are wrong. Chinese society does not encourage people to make changes by taking initiative. They do accept new concepts, but they take time to digest and during this time period there is a lot of resistance

coming from conservative forces and groups receiving benefit changes may offend them. The seniors play a main role among opposition factions, and culture also adds fuel to the fire. This hidden trouble is displayed especially strongly in state-owned enterprises and has a negative effect in their reform.

Features of 'Confucianist management'

'Confucianist management' features are familism, paternalism, hierarchical relationships, loyalty and diligence. In traditional state-owned enterprises, management culture follows on top-down leadership and authority, collectivism and mutual dependence with an emphasis on conformity and attachment to the organisation (Child, 1994). The employees need to be loyal to superiors and to the work, at the same time; the organisation provides welfare benefits (such as bonuses, subsidized dormitories and work injury insurance) and a relatively stable working environment (Douw, Huang and Godley, 1999). Top managers' responsibility has been delegated to lower-level managers, and effective power over workers is retained at a higher level (Deyo, 1978). Meanwhile the majority of employees accept this familistic context exchanging loyalty for protection, combining harmony with the values of respect for authority, Conformism and deference.

However, most enterprises' leaders were appointed by government institutions, under this ambiguous administration system, managers are uncertain about responsibility for enterprise goals. They tend to seek quick success in order to set an image to build prestige in the organisation and think less about long-term development, because no

one wants to sow and let others reap. On the other hand, managers of state enterprise who lack real decision-making power concerning transaction activities are strongly affected by state policy. In general, it is difficult to drive managers of state-owned enterprises to take responsibility for getting things done independently since they are more inclined to respond to the specific instructions from superiors.

Most private firms' management cultures tend to paternalism. They incline to assign members of the family or close relations to key positions in the organisation. Decision-making based on knowledge, personal intuition or past experience, generally do not open debates about leadership as either a threat to the face or a challenge to the authority. The majority of employees are expected to follow decisions and instructions from the top managers of the firm (Bond and Hwang 1986). They are supposed to think as their boss thinks and tailor their ideas accordingly. Different opinions and projects should go through private and personal channels with a duly respectful tone to the boss.

This paternalism management style causes two different aspects. On the one side, the owners are open-minded and would like to accept BPR as a management tool to implement enterprise reform in order to gain long-term benefits. However, the employees are afraid of losing their jobs or welfare benefits in middle-level management, and they do not understand and commonly ask "why change if it is working?" Managers may resist if BPR implementation endangers their benefits

therefore it is especially difficult to achieve objectives when the firm plans using BPR.

Management comparison

Comparing state-owned enterprises with private firm managerial behaviour they do share important similarities, such as loyalty emphasis. Both of them request staff loyalty at each level and managers base decision on the degree of loyalty when promoting staff. *Guanxi* has played an important role in sharing the power and benefits in both internal organisation and external network. However, they manage firms' responsibilities with slight differences. The private firm managers tend to towards more urgent and duty-bound operation than state-owned enterprises in order to keep the firms' further survival and development. As a result, private firms tend to gain the initiative to carry out change in order to meet the needs of the firms' advancement.

On the contrary, state-owned enterprises ownership belongs to the state; in almost every aspect they are dependent on the state, for market share, financial support, even material input, so that the management lacks an eager desire to adopt change. In short, Chinese management instill into people control through centralisation of power, meanwhile the lack of a governing system regularly to restrict the abuse of power by leaders, therefore owners or top managers are the key factors in leading organisation development.

The higher-level industrialisation has brought industrial civilisation and commercial expansion; as a result, people are more ready to adopt modern ideas and lifestyles. The south-east coastal locations are more developed compared with inland areas. People tend to have open minds and have the courage to undertake newly emerging ideas; therefore from other angles we find that there are still some reasons and opportunities to use BPR in enterprises' reform. With the Chinese economic reform thorough and lasting, each enterprise cannot avoid considering how they restructure or re-engineer their firm in order to maintain survival or gain competitive advantage in future challenging times.

2.4.2 Information technology influence

Information technology (IT) plays many roles in everyday operations of today's business world, such as: processing data, gathering information, collecting materials, accumulating knowledge, expediting communication, etc. Chan (2000) observes that IT is now taking a significant role in business processes – creating new needs, causing new product development, commanding new procedures, etc. these internal changes may also lead to broader shifts in products, markets and development strategy. Meanwhile, IT is a key enabler of BPR, it not only provides organisational tools for efficient analysis and communication, but connects management to a wealth of useful information (Wells, 2000). Many re-engineering projects involve cross-functional processes and organisations may need to use IT in order to restructure around these new business processes (Grover and Malhotra, 1997).

Chan and Choi (1997) summarise that IT has three roles: initiator, facilitator, and enabler. IT becomes an initiator that makes people recognise a powerful solution before seeking problem solving (Hammer and Champy, 1993), and new operations may initiate some existing IT, so the availability of IT is an initiator of change. IT may also be a facilitator, in order to fulfill new requirements or operations that need to design some new products, and these products may not be new inventions but may actually be made up of current technology to be repackaged for the new need and current environment (Chan and Choi, 1997), meanwhile, IT can be viewed as a part of the product itself and is frequently used to do something new.

Capability	Impact and benefit
Automational	IT can replace or reduce human labour in a process
Analytical	IT can improve analysis of information and decision making
Disintermediation	IT can be used to connect two parties within a process and eliminate intermediaries from a process
Geographical	IT can transfer and coordinate information with rapidity and ease across large distances, making processes independent of geography
Informational	IT can capture vast amounts of detailed process information for the purpose of understanding
Integrative	IT can coordinate tasks and processes
Intellectual	IT can capture and distribute intellectual assets
Knowledge management	IT allows the capture and dissemination of knowledge and expertise to improve the process
Sequential	IT can enable changes in the sequence of tasks in a process, often allowing parallelism
Tracking	IT allows the detailed monitoring of process status, inputs, and outputs
Transactional	IT can transform unstructured processes into routinised transaction

Table 2.3 How information technology influences process innovation

Source: Chan, 2000, p.228

More attention is paid to IT which acts as "an enabler providing rapid processing and analytical capabilities, parallel access and information capture" (Alavi and Yoo, 1995), and is "an enabler for working smarter and more productively" (Kanter, 1996). In Table 2.3 Chan (2000) summarises some of the reported impacts of IT on process innovation based on Davenport and Short (1990) and Davenport (1993).

IT impact on specific business processes

IT was generally considered a support tool in the early days of business, along with technological development, IT's usage and impact increased dramatically. It may be an attribute that IT helps organisations in creating further technological needs and encourages product and policy innovation. The company technologies initiated a change in the business processes, for example, word-processing programs may be utilised to facilitate parts of the job routine in becoming more efficient. Moreover the computer technologies also lead to organisation transformation, the advanced IT software is used to bypass the traditional organisational hierarchy to reduce information overload. Meanwhile, to propel for efficiency through IT applications can also change the business process itself, such as in imaging technology use, which enables the rapid processing and evaluation of data (Chan. 2000).

In e-commerce, the Internet provides easily accessible communication networks (Parker, 1996) for buyer-seller interactions that reduce material costs and decrease transportation for the company. Moreover, Internet technology is an easily available and low-cost alternative to support BPR implementation by reducing management's

concern for large amounts of organisational resources (Venkatraman, 1994; McGrath and Schneider, 1997). Internet technology can allow a quick return on investment to change and update easily, meanwhile Internet applications can share knowledge to spread expertise throughout an organisation and provide education capabilities (Wells, 2000), while cross-functional partnering is easily developed during BPR projects (Clark and Stoddard, 1996). In brief, Internet technology as part of an IT enabler has become a powerful tool to help organisations achieve process innovation while implementing BPR over the past few years (Wells, 2000).

Recently enterprise resource planning (ERP) has been used more by many enterprises, while the BPR benefits of ERP have been widely sequenced to "BPR followed by ERP" (Koch, 2001; Martin and Cheung, 2005). ERP includes functionality for vital departments and business processes in manufacturing companies (ERP-supersite 2000), owing to software combining with telecommunications and basic functions, ERP enables covering entire business networks, so ERP can support radical BPR in scope, configurability, and integrativeness three aspects (Koch, 2001). Generally speaking BPR covers a variety of meanings for enterprises changes, and ERP systems can be customized in different ways, therefore BPR and ERP can be designed to support each other, no matter in which pattern.

IT impact on organisations and management

IT is an important element in an organisation's transformation (Farbey *et al.*, 1994).

It increases the ability to streamline administrative processes and enables the decentralisation of the scope and scale of the business (Chan, 2000). IT improves telecommunication to reduce middle managers as channels for information (Winter and Taylor, 1996) and is a powerful agent for organisations in immediate and direct processing, analysing and communicating the information, to help organisations' further detection and understanding of the pattern and pace of change. Along with IT quick development, human knowledge and understanding also need to improve in order to follow rapid changes, so IT pushes organisations into becoming learning organisations.

IT enables an organisation to break old rules and create new ways of working (Hammer and Champy, 1993), it is not only intended to play a support role, but is now becoming a change catalyst (Srinivasan and Jayaraman, 1999). The company can implement innovative and radical changes through the re-engineering of strategic and value-added business processes with the support and assistance of IT (Choi and Chan, 1997). IT is a "prop" for business communication, transaction processing and decision-making systems in today's business (Chan, 2000). IT can help organisations achieve multiple goals through its analytical, structural, and design capabilities and process objectives (Davenport and Short, 1990).

Moreover, IT assists the firms to gain or retain operational efficiency by innovating different IT products for improved processes, in order to reduce the number of

intermediate steps and maintain high labour productivity (Chan, 2000). Overall, IT provides different capabilities and can be useful in different ways and for different purposes in organisational radical development (Ahadi, 2004). However, IT is neither the only cause of progress nor the singular facilitator of change (Chan, 2000), the human elements should be considered to be playing major roles also in organisational operations.

2.4.3 Human resources influence

The effectiveness of re-engineering programmes is dependent upon the 'human resources' who design and implement their operation. The human factor involves several social processes such as committed leadership, empowerment of employees, communication, teamwork and organisation learning. Many scholars and practitioners consider leadership to play a vital part in directing BPR efforts towards success (Hammer and Stanton, 1995; Cooper and Markus, 1995; Arendt *et al.*, 1995). Carr and Johansson (1995) state that a BPR leader should be able to establish a BPR strategy vision and be good at communication to motivate staff rather than directly guide them. Hammer (1990) suggests that the effective leader makes people want what he or she wants' and does not make them do what the leader wants unless they willingly accept BPR vision and clearly realise that distress might accompany BPR implementation.

Davenport (1993) also emphasises the central role of strong leadership and that BPR

must be driven by a dynamic executive who is fully committed to change. Willmott (1995) summarises the key **role of senior managers** in BPR implementation that is based on Hammer, Hammer and Champy's opinions.

- A leader who authorises and motivates the overall engineering effort.
- A steering committee chaired by the leader, comprising senior managers who develop the overall engineering strategy and monitor its progress.
- 'A re-engineering czar' who develops appropriate re-engineering techniques and is responsible for gaining synergy between different re-engineering projects.
- A process owner who takes direct responsibility for the re-engineering of a specific process.
- A re-engineering team who diagnose and redesign the process.

The outline of key roles reflects the leader who is pivotal in making re-engineering happen, therefore leadership must be strong, aggressive, committed and knowledgeable in order to force radical change and compel reorganisation.

The **empowerment** of the employee is also an effective factor in leading the success of BPR implementation. Hammer and Champy (1993) note that empowerment is an unavoidable consequence of re-engineered processes; the processes cannot be re-engineered without empowering process workers. As Eccles (1993) observes, many employees 'would simply prefer to be told what the company's goals are, what that means for them and their jobs and what in consequence, they will be required to do' (p.16). After employees are empowered, they develop initiatives considering how work should be approached and what technologies should be used, and when they are given the chance to participate potentially in the re-engineering process (Bashein *et*

al., 1994; Arendt *et al.*, 1995), they also to promote self-management and collaborative teamwork (CSC Index, 1994; Mumford, 1995; Rohm, 1992/93).

Communication is another vital aspect in facilitating BPR (Davenport 1993; Hammer and Stanton, 1995; Carr and Johansson, 1995; Rohm, 1992/93; Arendt *et al.*, 1995). It is also the must difficult part of BPR (CSC Index, 1994). Davenport (1993) stress that communication should occur throughout the change process at all levels and for all individuals, it should also be regularly utilised between those in charge of the change initiatives and those affected by them. Meanwhile, the communication should openly and honestly discuss certain sensitive issues such as staff reduction, so good communication is a guarantee for successful BPR implementation (Carr and Johansson, 1995). Based on the above consensus, Hammer and Stanton (1995) suggest ten rules to lead effective communication and also identify some barriers to take notice of in practice.

Nowadays, the tendency of organisations based on individuals performing individual tasks leans towards team based organisations. High-performance **teamwork** plays a crucial role in BPR implementation (Johansson *et al.*, 1993), it co-ordinates development across functional areas and speeds up the redesign process (Davenport and Nohria, 1994). Likewise, teamwork creates a learning environment to encourage sharing knowledge and expertise among team members (Rohm, 1992/93), so teamwork enhances quality of work (Davenport and Nohria, 1994; Davenport, 1993),

and reduces resistance to change. Davenport (1993) summarises three main functions of the BPR team: to manage work such as making group decisions and co-ordinating activities; to manage relationships for promoting trust and resolving conflicts; to manage external linking with customers, suppliers and market partners.

Re-engineering **teams** are required to have a diverse variety of skills in order to complete their task. Basically, they need business skills to understand the target of re-engineering and technical skills to perform the tasks; meanwhile, functional skills are the guarantee of re-engineering implementation. Launonen and Kess (2002) summarise eight functional skills based on Belbin's theory and on the modification of Platt *et al.*

On the other hand, team members' selection and management highly affect successful BPR implementation (CSC Index, 1994). Teams should always look for a balance from different perspectives (Hammer and Champy, 1993) and also need to consider people with indirect experience who are advantageous in bringing new ideas and challenges to customers. This should be regarded as another aspect in BPR efforts (Carr and Johansson, 1995; Kettinger *et al.*, 1997). Some scholars suggest that external consultants should be included in BPR teams (Davenport, 1993; Harrison and Pratt, 1993). Shabana (1996) believes they have rich experience of implementing similar projects in other organisations, and bringing a special ability to direct the re-engineering efforts to areas of substantial benefit to the organisation.

Snyder and Cummings (1998) state organisations' abilities of change and a continuous re-design business process that is associated with **organisational learning**. Organisational learning is a process to achieve organisational purposes and share knowledge among members of the organisation, it pervades different aspects, such as: organisations systems, structures and culture (Snyder and Cummings, 1998). Organisational learning is a driving force to lead organisational innovation and further rapid change, and is a foundation to guarantee BPR implementation; on the other hand, it also provides a stage for BPR utilisation.

According to Cayer (1999) **innovation** is a product of organisational learning. Rogers (1995) defines innovation broadly as "an idea, a product or process, system or device that is perceived to be new to an individual, a group of people or firms, an industrial sector or a society as a whole". Neely and Hii (1999) point out that process innovation refers to the "adoption of new or significantly improved production methods"; organisational innovation refers to "the introduction of new approaches to managing or organising the firm". Edmondson and Moingeon (1998) note that organisational learning and innovation are considered "intangible" resources because it is very difficult to imitate. Hence, companies are trying to use organisational learning and innovation not only to solve existing problems but also continuously to improve their status in the face of changing conditions.

2.5 BPR framework and model implementation in SMEs

There are a few papers that discuss how SMEs carry out BPR, especially to provide

framework and model to guide SMEs in implementing BPR. Chang and Powell (1998) modify the work of Ascari *et al.* (1995) resulting in a framework (Figure 2.2) of implementing BPR in SMEs. The details are discussed below.

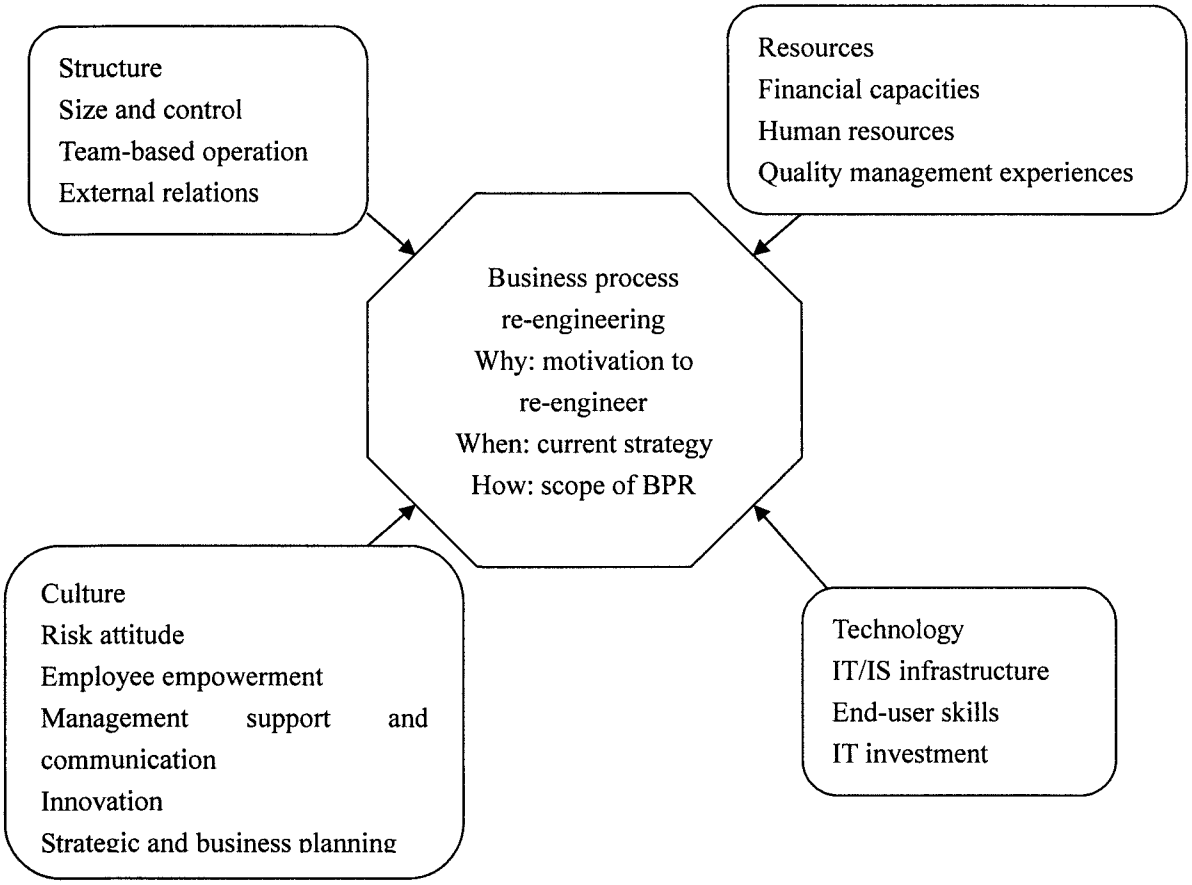


Figure 2.2 A framework of implementing BPR in SMEs.

Source: Chang & Powell, 1998; p.203

Structure

BPR emphasises cross-functional teams to adopt a broad perspective on cross-organisational processes along the value chain and changes the span of organisational boundaries (Sia & Neo, 1996) in thinking from a personality-based to team-oriented structure. Brien and Buono (1996) emphasise that team learning is the

ability of organisations to share and build on individual knowledge. SMEs are generally suggested to empower team and cross-functional orientations (Kinni, 1995), which enhances their ability to integrate business processes.

On the other hand, BPR should satisfy both internal (colleagues or suppliers) and external customers, SMEs tend to be closer to their customers (Brady & Voss, 1995), and they react quickly to keep abreast of fast-changing market requirements (Goss, 1991). However, SMEs have little power to influence market price and hardly enter into the industry, as a result, SMEs' strategic alliances encourage product innovation, bringing stability to cyclical businesses, expanding product portfolios, and making new supplier relationships (Maynard, 1996), therefore, Chang and Powell (1998) advise that SMEs can implement BPR on an interorganisational scale, owing to having simpler structures and greater flexibility. They therefore find it easier to implement BPR.

Resources

Resources in SMEs implementing BPR include financial capacity, human resource, research and development, and previous quality management experience. A shortage of finance is potentially a significant constraint on the growth of small businesses (Binks and Ennew, 1996) and may also inhibit SMEs undertaking BPR; therefore, SMEs are likely to carry out BPR on a short-term basis (Chang & Powell, 1998). However, human resources are limited in SMEs, which is another serious problem

when they are trying to implement BPR. Many scholars clearly indicate that owners of small firms are caught up in day-to-day operations, hampered by lack of appropriate management experience on the perspective (Haskever, 1996; Nash & Rock, 1996; Woods, 1996; Worsham *et al.*, 1997).

Moreover, SMEs generally lack sophisticated management support (Mackinnon, 1996), and face a challenge in attracting and retaining talented employees along with improving management teams. SMEs often adopt TQM for promoting growth, changing customer expectations or improving company performance (Shea and Gobeli, 1995). TQM-oriented organisations are in a good position to apply BPR techniques because BPR essentially extends the TQM concept of continuous improvement to drastic, IT-based, rapid improvement (Sharad, 1996; Zairi and Sinclair, 1995). Therefore SMEs having previous TQM experiences have more help to succeed in implementing BPR.

Information technology

It is the driving force for most re-engineering; it changes from producing data to integrating processes with functions (Ribbler, 1996), the goals of the IT function tend to shift from cutting costs to increasing knowledge and flexibility (Chang and Powell, 1998). The role of technology management is a success factor in technological innovation by SMEs (Cortese, 1996), also technological know-how may increase SME flexibility to recast production processes faster, therefore IT infrastructure can

be a significant barrier or enabler to planning and changing processes for BPR. However, some scholars point out that SMEs lack formalisation in IT strategy and owners often fail to recognise that new technologies can act as a source of competitive advantage (Eid and Moghrabi, 1995; Naylor and Williams, 1994; Friedman, 1996). Along with rapid economic development, Chinese SMEs tend to attach importance to IT/IS infrastructure building and utilise their development steps faster, which is less noteworthy in the above problems.

Culture

Culture change is necessary for effective organisational change (Sisaye and Bondnar, 1996), re-engineering processes failed in related cultural difficulties (Coleman, 1997), and therefore, Covey (1996) suggests that the only way to have an enduring competitive advantage is to create a culture by promoting learning and innovation. Hyvarinen (1990) indicates that most SMEs are willing to take risks and have the capability to enter new markets and to further adopt radical change further, but they tend more to accept a radical re-engineering approach as the strategy (Hirschfield, 1994). Re-engineering from the employee's aspect involves problem solving and process improvement (Spector, 1995) in order to increase motivation, reduce stress and improve performance by empowerment (Flynn, 1992), this provides an ability to allow rapid exchanges of innovative ideas and adapt re-engineering changes in the organisations (Goss, 1991).

Moreover, the organisations have a collaborative culture that is easier for them in implementing re-engineering changes (Majchrzak and Wang, 1996), meanwhile top management support and appropriate employee communications are also key factors in guaranteeing a BPR project getting along successfully in SMEs (Chang and Powell, 1998). The culture of innovation in SMEs is crucial to their success (Teng *et al.*, 1994) and also facilitates their BPR efforts. Davenport (1993) contends that BPR is the innovation of processes, which encompasses the radical improvement of business process performance through the use of innovative tools and work designs.

It is recommended that BPR initiatives start from a strategic perspective to make strategy an integral part of the re-engineering process and to understand better the company's markets and competitors in order to make appropriate business planning for further development (Schnitt, 1993). Therefore SMEs should make formal strategic planning in a comprehensive way, otherwise the narrower business vision and less ambitious goals may limit BPR outcomes.

Implementing BPR

SMEs should consider scope and scale when they are implementing BPR. The scope includes a number of functions integrated to form the process (Rockart and Short, 1989), and the scale is the extent of change in terms of how radical the BPR project is (Hagel, 1993). In the practice of BPR projects, SMEs tend to take a lower scale and less scope in order to avoid risks (Chang and Powell, 1998). The motivation and purposes for SMEs to re-engineer is the rapidly increasing volume, straining

processes and increased profits, most of them are more likely to re-engineer their process during stages of growth. In short, SMEs can benefit from re-engineering and are considered more receptive to implement BPR (Champy and Hammer, 1994; Manganelli and Raspa, 1995), but with a different background will focus on varied aspects and use diverse methods.

From a practice point of view, McAdam (2000) introduces the grounded model of successful re-engineering implementation in SMEs in Figure 2.3. After the frequency distribution analysis shows that market environment, customers and strategy, flexibility and change orientation and leadership were critical parts of the re-engineering strategy within SMEs.

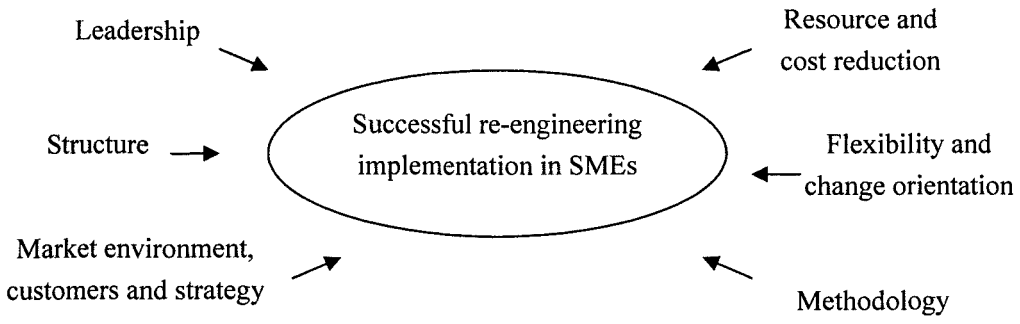


Figure 2.3 Re-engineering implementation factors for SMEs
Source: McAdam, 2000, p.33

Market environment, customers and strategy

Raymond *et al.* (1998) stress that the fast changing environment of SMEs was seen as a key driver for re-engineering change; in particular, the need for customer focus and analysis is a primary change requirement. Hale *et al.* (1996) observe that the

customer is a key advantage for SMEs in implementing re-engineering in comparison to larger organisations, in order to utilise this advantage the organisations had to have a careful analysis of the customer and market requirements, which have some degree of rigour planning approach rather than simply operating on a day-to-day basis. The management vision and strategy must ensure that the re-engineering efforts are fully aligned with business goals.

Flexibility and change orientation

The SMEs dynamic culture was seen as reflecting the fast changing marketplace; in support of this rapid change the management need to implement quickly the re-engineering change. SMEs are seen to have willingness, adaptability and empowerment to change and do it much faster than large organisations. Employees have to participate throughout the re-engineering process, and have appropriate responsibility, authority and motivation to implement the re-engineering changes (McAdam, 2000). The communication process is a key link running throughout the re-engineering efforts in all levels and shows why the change is needed (Hale *et al.*, 1996). Meanwhile, the empowerment within the re-engineering teams is seen as leading to increased cross-functional activity which is essential for re-engineering success, and SMEs have a much more natural cross-functional activity (Wiele and Brown, 1998) that is flexible when entering the role of re-engineering.

Leadership

The leadership commitment is critical to the re-engineering effort in SMEs (Business

excellence model for SMEs, EFQM, 1999). McAdam (2000) states that management commitment benefits from training and education in re-engineering change so that they can have more confidence in their support. In the decision-making process associated with re-engineering, managers need to act quickly and implement re-engineering solutions to address the fast moving environment in SMEs (Hale *et al.*, 1996). Raymond *et al.* (1998) and Ghobadian and Gallear (1996) found in their respective studies that the leadership challenge involves relinquishing some degree of control and power in a traditionally central and hierarchical power structure, which is a valuable prompt to empower the workforce to devise and implement re-engineering change in SMEs.

Three categories were discussed in the above which is related to the "soft" side of BPR (Marjanovic, 2000), these human aspects are more central than technology aspects (Davenport, 1993), and it has been widely recognised that human aspects present the major challenges in BPR. McAdam (2002) later suggests that SMEs should take an holistic understanding of re-engineering. The creativity, innovation and knowledge are the key catalysts for re-engineering change. Meanwhile, the political implementation factors influence SMEs change and their culture. Finally SMEs need to combine external business improvement approaches such as the Business Excellence Model with re-engineering effort.

The rest of the factors of resource could restrict SMEs' ability to function (Ryans, 1995), the key resource limited areas of effective re-engineering are in human,

material and finances (Barrier, 1994; Kinni, 1995). SMEs generally have small management teams and lack integration and diversity of skills and experience across many different functions (Raymond *et al.*, 1998), therefore further hindering SMEs in terms of human resource availability at higher levels. The limitations of material and financial elements in regard to re-engineering mainly focus on IT utilisation (Hale *et al.*, 1996), the high consultancy fees are another obstacle for SMEs implementation in re-engineering.

Owing to SMEs having relatively informal, flatter and highly centralised structures (Hale *et al.*, 1996), SMEs have less regard for management resistance and functional fiefdom (Francis and MacIntosh, 1997) when implementing re-engineering change, on the contrary, they have more chance of quickly forming team-based structures, because of their informal style and natural cross-functional working style. Finally McAdam (2000) points out that measurement is essential to ensure that the business performs successfully during the re-engineering transition, so it is very important to have some cost-benefit analysis of re-engineering efforts, so that the SMEs could justify the use of scarce resources.

2.6 Limitations of BPR theories

BPR theory is narrow and unilateral in explaining BPR implementation in Western SMEs. The theory focused on the influential factors in exploring the utilisation of BPR in SMEs. It was based on the assumption that BPR has general features, which can be used in any SMEs, regardless of different cultures of society. The theory is

limited from a practical point of view, when discussing how the framework is to be utilised in SMEs.

The existing framework (Chang & Powell, 1998) also discusses the main factors of influence, which vary in different SMEs. While much of BPR theory is still applicable to perform radical change by organisations, it needs some modifications because some influential factors do not suit different societies. For example, Western SMEs tend to consider methodology first when they carry out BPR (McAdam, 2000), owing to economic development in different stages; Chinese SMEs may tend to choose market strategy as the point to decide BPR implementation.

However, BPR theory is evolving in practice and is a rational development rather than a rush headlong into mass action at the beginning, although it is not currently popular in academic range; the theory is full of vitality in practice. Many scholars and participators shift attention to BPR utilisation in different ranges, such as BPR use in e-commerce. Many discussions focus on success and failure factors analysis (Al-Mashari and Zairi, 1999; Gardenne, 1999), these main factors influences are related to general culture aspect; these still lack investigation in SMEs, and this research will fill a vacancy to focus on how BPR is implemented in Chinese SMEs context.

Owing to cultural background differences, BPR utilisation emerges with variant

changes and emphasis. This research focuses on the national culture and how it influences BPR implementation, the clue of research follows Chinese culture in how it affects people's understanding, adoption, and operation and emphasises 'harmony', 'middle course', and 'loyalty', three points of view.

SMEs development is heavily restricted by resource factors (Raymond, *et al.* 1998). The resources embody financial capacities, human resources, and quality management experiences in the framework (Chang and Powell, 1998). The BPR principle emphasises that people resources are crucial to the success of BPR implementation (Rowden, 2002), and people resources compose organisational culture in every aspect. The leadership improvement is significant in influencing SMEs in implementing BPR, also government policy is a resource impacting upon them when carrying out reform and re-engineering, it might particularly exist in Chinese society. These above points compose this research structure and foundation.

2.7 Concluding remarks

In this chapter, the author makes a systematic study for the understanding of the concept of BPR from different interrelated perspectives. The chapter consists of five sections from superficial view to in-depth analysis of BPR understanding, related to this research. It starts by discussing BPR basic knowledge, laying the groundwork to understand general ideas of BPR. This research tends to adopt that BPR is a fundamental rethinking and redesign of business processes; it could be part of what is

necessary in the radical change of processes; it focuses on the organisation's core competencies to attain major business goals. Meanwhile, people, as one of BPR principles, will be emphasised in this research.

However, BPR exists with many controversies in the theory field, making people hesitate in practice. From many years of work experience, the author thought that Chinese SMEs tend to be more incremental rather than make radical changes when they implement BPR, many of them will integrate actual situations to analyse the existing process and then redesign it. The majority of them approve of IT enabling support for new business processes, and they tread a top-down management track in order to narrow their re-engineering focus within a single function. They are generally agreed that BPR may lack real novelty. These results appear to be to a greater or lesser extent the result of Chinese cultural influence.

Standing in a practical point of view, the topic of BPR within TQM is giving rise to discussion. Owing to the majority of Chinese SMEs tending to broad organisational improvement, and seeking for continuous change, the author agrees with integrating BPR and TQM when SMEs carry out reform, in order to exploit the strengths of both concepts and eliminate the weaknesses associated with each other. Meanwhile, culture, IT and human resources are the three main factors in how they influence BPR utilisation, whilst it is important for SMEs to consider before they act. In order to guide SMEs implementation BPR, the framework was introduced, which is also

significant in influencing the direction of this research. Finally, the limitations of BPR theories are discussed; it provides the gap and focus of this research compared with other research. The following chapter explains what methodology can be used to carry out the research.

Chapter Three Methodology of Research

Introduction

This chapter evaluates research approaches and describes the methodology used to provide data in order to investigate them; it provides appropriate procedures to lead this research. First the philosophical assumption of interpretivism is examined. Next research strategy choice for this study is presented including the reasons for using case study and what are the existing limitations; the generalisation, validity and reliability as research issues are discussed. And then the case study design shows how cases are selected and briefly introduces participant enterprises. After that data collection is explained this includes semi-structured interview, direct observation, and documentary information of three aspects. Finally data analysis using holistic content is described.

3.1 Philosophical assumption of Interpretivism

The constructionist worldview is adopted in this research and crucially influences theoretical perspective utilisation as well as guiding methodology choice. The interpretivist approach is employed for social investigation focused on deepening our understanding and knowledge (Angen, 2000). Considering the problems of BPR Implementation in Chinese SMEs relating to culture difference impact, this research is primarily concerned with 'how' people understand BPR theory, and 'how' they utilise the theory to reflect the belief that people negotiate meanings as they engage with the practice they are interpreting. Meanwhile, we reinterpret (Crotty, 1998) the environmental challenges that include culture, IT, and human resources influencing

SMEs implementing BPR, and pursuing framework for suitable utilisation.

Interpretive approaches consider reality that is subjective in the social world constructed and interpreted by humans as social actors according to their beliefs and value systems (Darke *et al.*, 1998). Interpretivism asserts the act of observation and interpretation is dependent on the perspective adopted by the observer (Clarke, 1994). The approach is usually concerned with understanding (Weber, 1864-1920) of the 'real world' issues through realising the reason why people make the choices they do (Jones, 2003), and focuses on their cultural and historical context (Orlikowski and Baroudi, 1991). It contends that theories and concepts tend to arise from the enquiry (Robson, 1999) and focuses on the complexity of humans' making sense as the situation emerges (Kaplan and Maxwell, 1994).

The interpretive research is that 'individuals act towards things on the basis of the meanings that things have for them, that meanings arise out of social interaction, and that meaning are developed and modified through an interpretive process' (Orlikowski and Baroudi, 1991). This research seeks to expose the individual cases of action associated with addressing BPR utilisation, understanding problems existing during implementation, and developing framework of internalising into practice in Chinese society. Meanwhile, the interpretive researcher attempts to understand deeply the phenomena being investigated, and acknowledges his/her own subjectivity as part of the process, which also allows participants using their own

words to draw on their own concepts and experiences.

The reason that interpretivist approach is chosen for this study is because the author believes that the best way to understand a complex phenomenon of BPR utilisation is to adopt this approach, which is concerned with understanding the experiences of the participants. Klein and Myers (1999) suggest that interpretive approaches can use research methods such as case study to give explicit recognition to the world of consciousness and humanly created meanings. Meanwhile, case study enables the perception of the special and detailed conception from different aspects, examining them in relation to each other, viewing the process within its total environment and also utilising the researcher's capacity for understanding.

3.2 Research strategy – case study

This section consists of four parts; why case study was used when carrying out this research; then the limitation of case study is considered. These two aspects form the basic knowledge of the research. The generalisation, validity and reliability are common issues using case study as a research strategy, it is a necessary theory guiding to the research, so that the author should regard these issues during research.

3.2.1 Rational use of case study

Case studies are concerned with process change and development (Willig, 2001), meanwhile providing an opportunity for exploring theory development through the

systematic piecing together of detailed evidence, in order to generate theories of broader interest (Hartley, 2004), suitable to achieve this research aim, so that case study as a research strategy is adopted for collecting primary data. The advantage of case research is that it offers a high validity for practitioners, which leads to new and creative insights into knowledge and practice (Voss *et al.* 2002).

Yin (2003) suggests that case studies are appropriate where the objective is to study contemporary phenomenon within some real-life context, and where it is not necessary to control behavioral events or variables. The greatest advantage of using case study is the necessity of providing a comprehensive understanding of the issues under investigation. The contemporary phenomenon being investigated by this research is the understanding of how the BPR is used within the context of Chinese SMEs. The phenomenon has to be investigated in implementation of BPR because all the variables in that context, such as culture differences, contribute to its understanding.

Case studies can be used in different types of research such as 'positivist stance' (Yin, 2003; Benbasat *et al.*, 1987) or 'interpretivist stance' (Walsham, 1993; Myers, 1997), it can be used in many types of research purposes, for instance exploration, theory building or testing, and theory extension or refinement (Voss *et al.*, 2002). In this research, the author wants to discuss the cultural influence on the Chinese SMEs using BPR, and explain the process change development in the search for the way of

effective implementation of BPR. Thus, the choice of case study as the research strategy seems feasible and justified.

Orlikowski and Baroudi (1991) state that case study methods are appropriate to validate interpretive knowledge. It is particularly appropriate when theoretical knowledge investigation is limited and an understanding is not well developed (Benbasat, *et al.*, 1987). It is considered particularly relevant in understanding the use of BPR in SMEs. This is because using BPR in business development is a necessary part of change process and because little is known about the actual BPR usage in SMEs especially in Chinese SMEs. On the other hand, case study has the ability to capture realities in greater details and analyse more variables (Benbasat, *et al.*, 1987), it also provides the opportunity to ask penetrating questions and to capture the richness of organisational behaviour.

On the other hand, the failure of using questionnaire collecting data is another reason forcing the author to change her research methods. After finishing the pilot study the author has decided to use questionnaire, collecting primary data for preparing the final research. During a period of nearly eight months requests were made three different times in an endeavour to obtain questionnaire feedback. Negotiations with friends and agents were also carried out over a number of times. The author found the problem from test results before signing the contract with the questionnaire distribution company. She realised that she could control the data reliability by

checking 20% of the collected data, but she considered that she could not guarantee the data validity. From the number of inconsistent answers received the author realised that data received was useless and invalid in reflecting an organisation's circumstances. Therefore, the author shifted to using case study as a major method of collecting data.

3.2.2 Limitation of case study

From Mid Point Progression (MPP) preparation, the researcher realised that questionnaire filling in could not guarantee reliability and validity; therefore this research is compelled to give up quantitative data collection as a major approach and shift heavy responsibility to qualitative data collection. As a result, the research might regretfully lack an overall generality of information compared with the use of questionnaire collection data. Design and the scope of case studies selection in order to ensure that the research questions can be appropriately and adequately answered can be difficult. The availability of suitable case study sites may be restricted, and depend upon the relationship with organisations.

Guanxi is a very important part of Chinese culture; it can be defined as a continual exchange of favours arising from personal relationships or connections (Chen, 1995). The majority of enterprises do not realise that to help academic research, they must set up helpful conditions when the researcher visits the enterprise. Hence, the author should spend a lot of time and effort to find *Guanxi*, in order to manage this research.

It is a difficult situation, as research direction, meetings, research methods and research objectives are always changing followed by questions about how deep and wide is the relationship or leadership. Interview results are especially varied, being influenced by relationships, how detailed and responsible are the responses depending on closeness of the relationship? As a result, *Guanxi* really influences research quality and scope in certain levels, makes an obvious limitation and may even affect results.

In particular, the data collection and analysis processes in case study methods are both subject to the influence of the researcher's characteristics and background, and rely heavily on the researcher's interpretation of events, documents and interview material (Galliers, 1992) and these may limit the validity of the research finding. The result of case studies depends greatly on researchers' attributes and how they interpret events rather than use a different method of approach. Kaplan and Duchon (1988) observe that understanding of reality in based on researchers' interpretation of data. They argue that the same data may be interpreted in different ways.

The issue of bias is introduced when research collection and analysis data also needs to be considered. Orlikowski and Baroudi (1991) point out that the interpretive researchers acknowledge the subjectivity of their analysis in their predisposition, beliefs, values and interests that always intervene to shape their investigation. Darke, Shanks and Broadbent (1998) identify two types of bias: (1) the behaviour of

participants may influence researchers' view on events. (2) the researchers' own beliefs, values and prior assumptions may prevent sufficient investigation and consider analysis contradictory data which evidently affects the final conclusion. As a result, Yin (2003) advises that researchers should take care from design through analysis, possibly to reduce bias when they carry out research.

On the other hand, case study has also been criticized for lack of generalisation. Yin (2003) remarks that case studies are generalisable to the theoretical propositions, not to populations. Walsham (1993) argues that validity does not depend upon the representativeness of cases in a statistical sense, "but on the plausibility and cogency of the logical reasoning used in describing the results from the cases, and in drawing conclusions from them". This research does not seek for the generalisation of population; it focuses on problems influencing BPR utilisation in Chinese SMEs, which provides a general useful framework and effective practice for SMEs. The next section discusses generalisation in detail and explores ways of maximising it.

3.2.3 Generalisation

Qualitative research is very much influenced by the researcher's individual attributes and perspectives. The goal of qualitative research does not produce a standardised set of results, it produces a coherent and illuminating description of and perspective on a situation that is based upon and is consistent with detailed study of that situation. Therefore internal validity of qualitative research is very important, which provides

diversified results that depend upon a particular situation of other researchers. It clearly typifies that the characteristic of qualitative approach is not consistent with achieving external validity as it has generally been conceptualised (Schofield, 2000).

However, the issue of generalisability is also salient for more basic qualitative research. Gomm *et al* (2000) discuss that generalisation is an issue that can be of significance for case study in two respects. First, the researchers may seek to argue for the general relevance of the findings they have produced. On the other hand, it is rare for cases to be selected to cover significant likely dimensions of heterogeneity in the population. Secondly, much case study research involves generalisation within the case(s) investigated and there is often a lack of clarity about the boundaries of the case, and sometimes the evidential base used for internal generalisation is obscure or inadequate. As a result, case study needs to pay more attention to empirical generalisation that considers the relevant respects in which the target population might be heterogeneous.

The goal of this research is describing and understanding culture and policy that might influence Chinese SMEs implementation of BPR, along with the problems that have arisen and the solutions. The author hopes to provide a picture of what is the current utilisation BPR phenomenon that can be used for understanding or reflecting on it and possibly improving it, as a result designing research to maximise the focus between the research site and what is more broad in society, and as far as possible to

provide generalisability.

At the same time, thick description (Ryle, cited in Geertz, 1973) is another approach to increase the generalisability of qualitative research, which provides the information necessary to make informed judgments about the degree and extent of what fits in particular cases of interest. On the other hand, thick description is necessary to allow individuals to ask about the degree of focus between the cases studied and the case to which they wish to generalise, even when the fit on some of the basic dimensions looks fairly close (Schofield, 2000).

Moreover, multi-site qualitative studies focus on the same issue in a number of settings, using similar data collection and analysis procedures in each place to provide a firmer basis for generalisation to many other situations, because the finding emerging from the study of several very heterogeneous sites would be more robust and thus more likely to be useful in understanding various other sites than one emerging from the study of several very similar sites (Kennedy, 1979).

As a result, this research carries out multiple case studies and considers the size and system difference of organisation that may influence BPR implementation, in order to increase generalisability. At the same time, it provides depth and breadth of description and understanding of what is the story of different organisations when utilising BPR. So this research may reflect general problems in existence when

Chinese SMEs carry out BPR and then seek for the way of solving the problems and providing the framework as a guide in practice.

3.2.4 Validity and reliability in case study research

The broader arguments of validity in qualitative study concerns the legitimacy of social science research and the utilisation of qualitative methodologies for human inquiry. The qualitative and interpretivist research techniques are subjective and unscientific compared with positivist traditional study. However, in practice quantitative measurement has limited applicability to qualitative study, therefore, qualitative researches have adopted the quantitative criteria for validity in qualitative studies (Silverman, 1993). The vision of 'subtle realism' came from Hammersley's (1992) view that 'validity which interprets of the extent to those accurate features of the social phenomena'.

In order to enhance validity, this research adopts some procedure suggestions (see Silverman, 1993; Hammersley, 1995; Creswell, 1998) including careful case selection, inductive analysis, triangulation and clarifying research bias, at the same time using well known methodological criterion to enable judgment of the degree of confidence in case study. Moreover, the data collection used three different methods that comprised interviewing, direct observation and documentary information in order to provide opportunities to cross-check the consistency of the findings.

The data analysis employs 'direct quotations', so that the reader can verify and validate the findings of the analysis for themselves. The generalisation of the results is based on the views of different respondents' perceptions, which means management and operational people's perceptions have been constantly cross-checked during the analysis, in order to balance the views and experiences.

Reliability, on the other hand, can be as problematic as determining research validity. In qualitative investigation, reliability focuses on the ability of the research process to produce consistent results over time (Miles and Huberman, 1994). However, there are some factors associated with the researcher and the context of research that may affect and impinge on research reliability. Thus, reliability in this research emphasises researcher's impact on the study and reliability in the field during analysis.

The issue of potential bias is in universal existence in qualitative investigation when researchers act as the research instrument, designing, conducting and interpreting research studies (Padgett, 1998). However, researcher bias can be avoided and minimised if researchers reflexively identify their own value systems, consider areas of subjectivity and commit to limiting the impact these have within the research programme. For example, in this study, the researcher and practicians understand BPR whether they are consistent or discrepant and how big the gap is between their understandings. As a result, the researcher took more Chinese reading and compared

with Western BPR theory, to understand and find the gap between them, and then to explain initial BPR meaning when the researcher carried out interviews and on the other hand to interpret how practicians understanding BPR.

To ensure reliability in the field, all interviews were taped and summaries completed after every interview, at the same time, the field notes as Bryman (1988) and Silverman (2000) suggest were taken during interviews and visits to enterprises soon afterwards, in order to keep fresh ideas and special views as well as gain deep impressions relating to the research topic. To strive for reliability in research analysis, the researcher again employed triangulation techniques to assess the consistency of interview responses with the impressions gained during visiting observation, along with documentary information supporting and checking. In short, if research methods used in each step are reliable, that will guarantee the conclusion being valid.

3.3 Case study design

Case studies design a broad outline of contingency plans open for modification and extension as necessary during the course of the study (Cantrell, 1997). The design presumes a world view in multiple realities, which are complex and dynamic and change over time, as Merriam (1988) states that the world is not an objective thing out there, but a function of interactions and perception. This view guides this research to attempt understanding and interpretation of processes or events observed in Chinese SMEs natural setting.

Yin (2003) suggests that multiple case designs are desirable when the intent of the research is descriptive, theory building or theory testing. Benbasat *et al* (1987) note that multiple case studies are suitable for investigating "certain types of problems: those in which research and theory are at their early formative stages; and focus practice-based problems, where the experiences of the actors are important and the context of action is critical". They argue that multiple case studies enable the researcher to relate differences in context to constants in process and outcome, at the same time, to allow cross case analysis and extension of theory. Miles and Huberman (1994) argue that multiple cases enable the research to avoid those findings that are merely the result of idiosyncrasies of the research design.

On the other hand, Eisenhardt (1989) suggests that multiple case designs require the study of at least four, but not more than ten cases. Yin (2003) suggests that multiple-case design needs to select three or four cases to consider discussion of each different aspect, reasons and purposes. For pragmatic reasons of time, the number of cases in this research was planned as six SME cases, and the reason for selection was as described in the next section. The multiple data sources will provide many insights into the phenomenon to extend theory generalisation.

3.3.1 Selecting case studies

The studies were selected in order to cover different ownership of organisations, to seek whether the system of organisation will influence BPR implementation, and at

the same time to consider whether the size of organisation may affect BPR utilisation. Since the Chinese government allowed private economy to come to a realistic arena in the eighties, varied economic forms are springing up like mushrooms. There are four types of ownership organisation which play a main role in Chinese economy, which comprise state-owned enterprise, collective enterprise ownership, privately owned, and nongovernmental joint-stock enterprise.

The collective enterprise ownership of organisations tends to break down slowly and is being carved up by private ownership, meanwhile, this type of organisation declines and does not have strong enough survival capability in an intensely competitive market. Therefore, this collective enterprise ownership of organisations will be ignored in this research. As a result, the case studies selected focus on the other three types of ownership organisations.

To balance the size of organisations, the case studies planning chose a half sample as small firms and half as medium-sized enterprises. Actually, in the practice of collecting data, the author found that the small firms still do not have the capability to carry out dramatic change, although the theories said that they have many favourable conditions to implement reform. In fact, they still cannot currently manage big changes especially in Chinese small firms. Therefore the case studies were chosen to focus on medium-sized enterprises rather than the average enterprises.

Moreover, from previous working experiences and pilot study, if the organisation is weighed down with work, it does not have the vigour to consider organisational change and future planning, as a result, this research case studies were selected to focus on the organisation improvement and development, so that they will provide a rich and varied organisational change story, much related to part of BPR implementation. The case studies sampling selected, followed by Saunders *et al* (2000) suggest that it belongs to purposive sampling under heterogeneous type. The heterogeneous emphasises collecting data to describe and explain the key themes (BPR implementation) that can be observed. The next section states how the negotiation process took place in order to gain access to some of the organisations.

3.3.2 Participant enterprises

It is an important step to negotiate with people who are the key persons and have wide and deep relationships with organisations. Owing to cultural difference in the East, relationship plays a main role running throughout this research. During pilot study, the author gained great help from her friends, classmates, and old colleagues, in contacting the key person, manager or owner in accepting interviews. The results laid the groundwork for this research. Based on these participant enterprises, the five new organisations firmly agreed to contribute their time and experience to this research after many times of telephone contact with friends.

During MPP the author gained brief information about each enterprise from various

channels. Some of them may not directly implement BPR, but they have rapid changes and dramatic development experiences. Other enterprises will again be used as pilot study. They made many changes since the author's last visit. It is therefore interesting to go back and see how they developed. The six participant companies are:

Case	Name of organisation	Size of organisation	System of organisation	Type of manufacturing
A	Huadian Television Factory	Medium-sized	State-owned enterprise	Equipment manufacturing
B	Daqiao Machine Factory	Medium-sized	Joint-stock system	Equipment manufacturing
C	Zhuqiao Printing Co., Ltd.	Medium-sized	Private joint-stock company	Process manufacturing
D	YuYue Medical Equipment Co., Ltd.	Medium-sized	Private company	Equipment manufacturing
E	Sample Technology Co., Ltd.	Medium-sized	Share company	Equipment manufacturing
F	Sujiang Technology Co., Ltd.	Small company	Share company	Equipment manufacturing

The results collection and analysis are described in the next chapters of this thesis.

3.4 Data collection

The aim of data collection is to produce as rich a description as possible of the phenomena being studied. Using several methods of data collection could find new insights and modes of analysis that are unlikely to occur if one method alone is used. In this research data was collected through semi-structured interviews, direct observation and documentary information. This triangulation of data collection provided multiple perspectives on an issue and supplied more information on

emerging concepts. At the early stages of data collection, it was more open-ended, and in later stages it was directed by the emerging concepts (Glaser and Strauss, 1967). As Orlikowski (1993) notes, theory building case research is the freedom to make adjustments during the data collection process. In the following paragraph, more details are introduced of each method of data collection.

3.4.1 Semi-structured interview

Today, the interview is extensively used to collect information, it seems we live in an 'interview society' (Atkinson and Silverman, 1997; Silverman, 1993). Through interview, researchers can best approach case participants' views and interpretations of actions and events (Walsham, 1995). The primary goal of interview is to elicit the respondent's views and experiences rather than collection of data following pre-established response categories (Kaplan and Maxwell, 1994). Also, interviews are flexible enough to adapt different contexts of organisations and to pursue varied tracks and suggestions, in order to seek theoretical sensitivity development through research process (Glaser and Strauss, 1967).

The main tool used for collecting data for this research is the semi-structured interview. The great benefit of semi-structured interviews is that the interviewer can prepare a list of themes and questions in advance, in order to have a clear direction and to be in control at all times. The research interviews are held with either the owner/manager or someone responsible for process change. Each interview starts

with a brief introduction of the purpose of the research in order to arouse the attention and interest of the interviewee. The interviewee is encouraged to respond by some broad questions, and further to offer his/her own view of the world and to range more broadly than in the normal structured interview. In fact, the majority of interviewees were busy and they did not use their initiative in asking questions. However, they provided some extra information when the author asked about some related topics of research questions.

The interview guides are presented in appendix A. The interview guides provide a greater degree of freedom in allowing participants to answer in their own terms. Meanwhile, four organisations filled in questionnaires (Appendix B) before taking the interview, so general information for that enterprise was gained, hence during the interview the researcher could focus on details describing existing problems and the solving of these problems. Research confidentiality is verbalized and confirmed with every organisation to ensure anonymity and to protect personal privacy in the study. Brief coding was used during the gathering and processing of interview notes, tapes and transcripts.

Each interview lasted approximately forty minutes and the interviews were recorded, subsequently, the transcript was carried out immediately so that interviews and notes could be completed, whilst the experience was fresh in the mind. On the other hand, if there are still puzzles or perplexities then corrective measures can be taken. The

advantage of employing multi-methods of collecting data in case studies is to compare and replenish sources of information.

3.4.2 Direct observation

Observation was undertaken when the researcher visited the firm to arrange the interview. It was a subsidiary method helping to find more details with a valuable relation to the research objective when watching and listening during research. In descriptive observation Robson (1999) suggests concentrating on observing the physical setting, the key participants and their activities, particular events and their sequence and the attendant processes and emotions involved. According to the research objective, the author focused on overall features of the manufacturing company: general management, staff mental outlook, working environment, labour intensity etc, in order to gain a brief image of the companies and to testify whether they improve business performance or not after carrying out reengineering.

Sometimes, the researcher can find a few problems; through direct observations the researcher can sometimes reveal problems that people do not want to discuss. For example, the author visited FengTai Company (pilot study in MPP) before carrying out an interview and found that some parts of workshops had serious pollution and the workers did not have good protection measures in their place of work. This problem was not mentioned during the interview and the author was of the opinion that the problem would affect the feeling and attitude of the workers. After talking to

the workers the author found that her suspicions were absolutely correct.

On the other hand, the interviewer can closely observe people's facial expression, tone of voice, eye contact, when they are talking. Carefully observing aspects of organisation such as relationship, behaviour, working atmosphere, attitude, spirit even emotion, can elicit more wide and deep information, helping the researcher to understand the situation comprehensively. Talking to those who 'approved' and 'disapproved' of the activity, hearing their conversations and joking comments the author grasped the essence of the data in describing the environment of this firm and helped the final analysis of the case study.

3.4.3 Documentary information

Yin (2003) suggests that documents are used in case studies to corroborate and augment evidence from other sources. Also, documents are helpful in verifying the correct spellings and titles or names of techniques or names of organisations that might have been mentioned in the interview. At the same time, documents can provide specific details to confirm information from other sources, if the documentary evidence is contradictory; the researcher needs to pursue the reasons behind this. Finally, inferences can be made from documents; however, this means treating inferences as clues only worthy of further investigation. Because of these overall values, documents play an explicit role in case research.

The common documents collected in this research are:

(1) Briefings

(2) Reports of events

(3) Description of the business process re-engineered

(4) Organisational chart

(5) Corporative document – roles, report progress, projects, seniors' speeches, etc.

3.5 Data analysis

Bogdan and Biklen (1982) advocate that qualitative data analysis process 'involves working with data, organising it, breaking it down, synthesizing it, searching for patterns, discovering what is important and what is to be learned, and deciding what you will tell others'. While and Huberman (1984) refer to data analysis needing considerable data selection, simplifying, abstracting and transforming. Spradley (1979) states analysis as a "systematic examination of something to determine its parts, the relationship among parts, and their relationship to the whole". They argue that data collection and analysis should allow flexibility in data collection triangulation so that researchers can closely observe new ideas or patterns emergence.

Therefore, researchers should have some sense of purpose and direction in order to analyse and interpret qualitative data (Patton, 1980). The importance of conducting and organising the data as well as establishing the limits and boundaries throughout remains in focusing research questions and avoiding wasted time and resources on diverse routes.

This research starts **organising** the raw data when undertaking qualitative analysis, the author checking the quality of the information collection, gaining a broader sense of the data. And then, **interpreted** data attaches meaning to the analysis. Misuse of words and lack of precise definitions from the BPR literature have been amongst serious reasons for misunderstanding and misinterpretation among practitioners, therefore, the data analysis is concentrated on comparisons and discussions from direct quotations of the respondents' interviews. The direct description of the interviewees' own wording maintains precise research findings and transparent evidences. On the other hand, there are no filters caused by hidden abstractions and interpretations of the organisational phenomena to the reader.

The value of this research contribution comes out, followed by **evaluation** of the information by making judgments based on the researcher's personal beliefs and theoretical evidence about the value of what has been analysed and interpreted. As previously discussed, in order to increase qualitative research generalisability the detailed description is utilised to relate activities and experiences of people involved within the BPR programme. The purpose of this description is to show what happened during the investigation process, what is the respondent's understanding of the BPR, and what particular activities and experience are supporting the re-engineering programme implementation. The analysis and interpretation of the data as well as investigation of the relationships among the six case studies are covered in chapter 4 and chapter 5.

3.5.1 Holistic-content perspective

This research is interested in how Chinese SMEs use BPR, the data collection tending to the complete BPR utilisation story of each organisation, and concentrates on four aspects, which relate to understanding, implementing, problems and culture influence. The author analyses the meaning of each aspect in the light of content that emerges from participants of the narrative.

The analyst took account of the company implementation of BPR around case events being analysed, in order to show how these implementations differ and in which the general principles should be operating, integrating culture difference and knowledge acceptance in the particular implementation which connects the events in the case. The analyst will be able to show how the general principles being examined manifest themselves in changed form.

According to Yin's (2003) suggestions about case study method in Figure3.1, each individual case study consists of a "whole" study, so the analysis starts each case, 'the report should indicate how and why a particular proposition was demonstrated (or not demonstrated). Across cases, the report should indicate the extent of the replication of logic and why certain cases were predicted to have certain results, others having contrasting results.'

Through analysis of individual cases, and then combined with this research, the main aspect is to compare differences and describe reasons by focus of research objectives.

The concrete step analysis single case will introduce general organisational background first, and then discuss reasons for change, implementation, problems and culture influence of four main aspects in the organisation, followed by a summary table talk about what is being re-engineered and what are the main problems among these enterprises, so that the reader has a clear view about each organisation and how they implement BPR/change process.

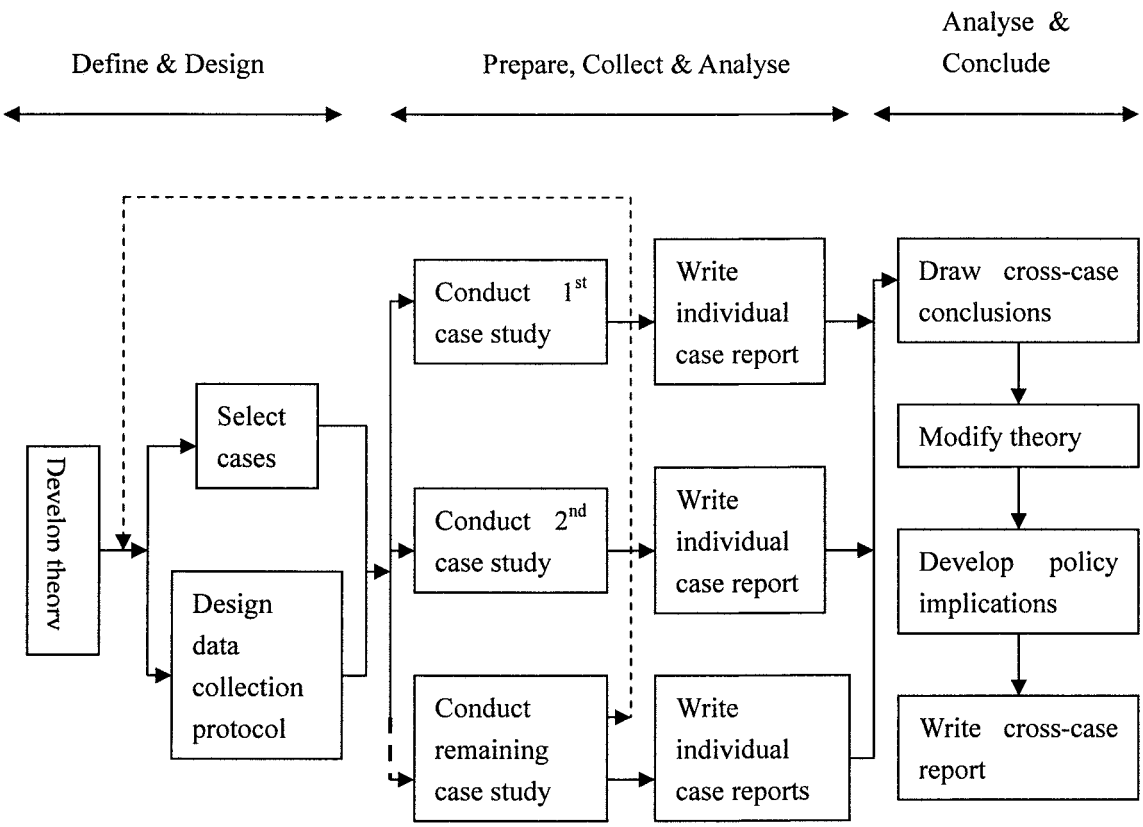


Figure 3.1 Case Study Method

Source: Yin, 2003; p.50

On the other hand, the pilot study results have served as a great source of inspiration for the author. Some points such as IT support, culture influence, management improvement, BPR and TQM interaction, make an interesting and important section

in the whole case analysis. The multiple case analyses started with a table of category coding, which are based on common points and related to this research objective, and then describe how they understand BPR, from a social cultural aspect and organisational culture aspect on what they focus, what are the main problems and how they solve them, culture and how IT influences organisations' implementation of BPR. The two main issues will illustrate the relationship between size of organisation and owners' system of organisations and whether they influence implementation of BPR.

Overall, this research analysis tends to emphasise a rich general content rather than detailed category differentiation, because each organisation tells a different implementation BPR story, so that it is very difficult to divide into detail aspect analysis; it has no mix that can be compared, but under brief content of four main aspects they may have more information to share and discuss and it is more significant than gazing at a small branch of category. Considering Chinese SMEs development unbalance, and each case stressing a different aspect, as a result, this research flexibility adopts content analysis in the light of specific conditions. Patton (1980) states that "... the analysis of qualitative data is a creative process which requires a great deal of intellectual and hard work and because different people manage their creativity and intellectual production in different ways, there is no right way to go about organising, analysing, and interpreting qualitative data". The next chapter analyses individual cases based on the approach being introduced.

Chapter Four Individual Case Anaysis

Introduction

This chapter analyses each case in order to determine how they carry out BPR or organisational change. It is based on primary data collected from semi-structured interview, direct observation, and documentary information in case organisation. However, each case has its unique story of radical change or conservative improvement, therefore the analysis focus on these research objectives in order to avoid a big deviation.

On the other hand, each case has its own development feature and industry background, so the analysis of each case is slightly different, depending on its actual situation in the management operation. For instance, some organisations did not have a solution when they faced problems during BPR implementation. On the other hand some of them provided their experiences as to how they solved problems. As a result, the analysis of each case has its own characteristics related to the research objectives.

The general analysis structure starts with reasons for choice of each case and interview arrangements, so that the reader has a brief idea of the research track. Next the background of each organisation is introduced, it is a necessary prerequisite to understand each case. Then there is discussion about the reason for carrying out reform or re-engineering, and existing problems when the organisation implemented radical change, some of them gaving brief ideas for problem solving. This section

answers the research question three and four (p. 9), in order to achieve part of the research objectives.

After that the majority of them provided relevant data in IT support, BPR and TQM interaction and culture influence. These main aspects are significant elements to make up a framework for this research. Finally, many of them described the future prospects for their organisation, in order to provide an integrated story for each enterprise. However, some of them presented different information which reflected on their management features. The table of case study summary is provided at the end (p.208-209). The detailed analyses of each case are as follows:

Case A: Huadian Television Factory Case Analysis

Reasons for choice of case and interview arrangements

The aim was to analyse the problems faced and the reasons for failures when state-owned enterprises carried out re-engineering giving attention to policy making. On the other hand, the author wanted to discuss this case thoroughly to find out different owners' systems' intentions, methods and concepts of how these influenced reform compared with other cases and what lessons were learned as to how they could have changed from opportunity at beginning to near bankruptcy in the end.

As a result, the author relied on many years of working relationship to make successful contact with the technology manager and production manager who

currently work in the factory; they each provided enthusiastic support towards the author. The technology manager is in charge of day-to-day working at the moment, he accepted the interview in his office, after a wait of one hour, and we centred on the topic of wide reform. The production manager arranged an interview in his parents' house--he is a cautious person as is shown later on--and he provided more details of re-engineering implementation. The assistant director is the husband of one of the author's friends. He left the television factory when they carried out re-engineering. He had been responsible for re-engineering planning previously; he has rich experience of management and has a good insight into re-engineering, so that the author with the help of her friend obtained an interview in the assistant director's house.

Each interview lasted more than thirty minutes and was carried out in a friendly manner. Apart from a few instances there were no barriers to any of the discussions. The author gained much information from different points of view and different positions. The items of information gave each other mutual support or complemented each other; they gave a comprehensive reflection around re-engineering circumstances.

Background of Huadian television factory

Under Hua Dong electronic group of corporation control, Huadian television factory was built in 1986, they started manufacture in 1988. In the first three years they

produced black and white televisions, and they then started colour television production. In total they produced 200,000 black and white televisions along with different types of colour televisions (which included 17", 21", 25", 29"), numbering more than 500,000. They have a 10,000 square metre factory building, and they have an assembly line for television internal components. At the same time, they have another assembly line workshop that can be used. They have three-television assembly lines, which can produce different categories of screens from 14" to 37" size colour television, and they can produce 400,000 colour televisions per year.

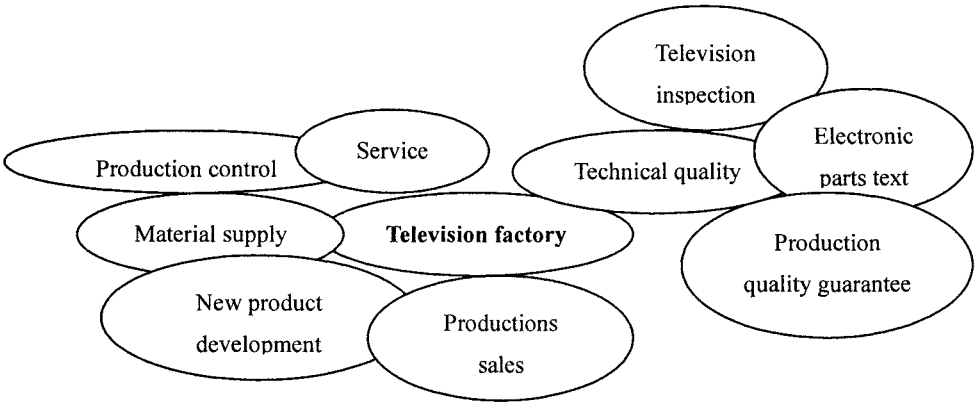


Figure 4.1: The television factory structure

Huadian television factory is a relatively independent cost accounting entity, under the Hua Dong electronic group corporation's leadership. They are engaged in production, supply, and selling, new product development, after-sales service etc. They had 278 employees during 1998; 37.4% of them were graduates from university or poly-technical school. They have 7 high-level engineers, 24 engineers and 36 assistant engineers. During the busy season the factory needs to recruit

temporary employees. The organisation's structure shows below that they have a perfect management system.

The factory has 250 sets of testing and measuring instruments, the colour centre signal instrument was bought from a German RS Company, and can provide PAL, NTSC, SECAM three types of sound and sight signal. Huadian television factory is located in Nanjing City, beside Hua Fei television tube limited (liability) company, and it has convenient communication and perfect management. Because its own brand is not well known enough and with limited market share, it joined in cooperation with large colour television factories, to show latent development prospects.

Reason for carrying out re-engineering

During 1999 the Technology Manager was aware that the colour television trade was on the decline and in order to maintain the status quo and seek survival the group of corporation leaders considered that the television factory's, management system was not suited to develop requirements. After they visited Haier enterprise, which is a famous and successful enterprise in China, they decided to carry out major change and they agreed to call in strategy re-engineering or strategy readjustment, and imported a nongovernmental management system to manage the television factory.

The Production Manager further commented that because Chang Hong is the largest

television factory in China, it commenced colour kinescope in 1997, which resulted in a colour television price drop by a big margin. Chang Hong controlled all the colour kinescope, so that the rest of television enterprises did not have space to survive, delivering tremendous blow to the colour television trade, which went backwards. Unfortunately, the government opened one eye and closed one eye; therefore, Chang Hong action seems to be a half official monopoly, which directly inflicted heavy losses on Huadian kind of television factories, which did not have human resources, machinery, facilities and dominant fund position. During that time, the television factory was the only one having a condition of reform among the group of corporations, as they are a relatively independent cost accounting entity, so the strategy readjusted was the start of the work.

Process of re-engineering

At the beginning Huadian television factory invited Hua Ning Company to rent the factory; it has a nongovernmental management system plus a state-owned enterprise management concept. The Technology Manager thought that the concept of re-engineering was right, because of various kinds of circumstance restriction; as a result, it did not achieve the desired results. The Production Manager also agrees with this opinion and said that Hua Ning Company is a subsidiary company under Hua Dong electronic group of corporation. The superiority of Hua Ning directly faces the market, having rich marketing operation experience independent cost accounting. The detailed methods are as follows:

1) Human resource

"The only good thing that was done was that they made appropriate arrangements for employees" the Production Manager said. He stated that many employees lost their job when the television factory carried out re-engineering and more than 60 percent of employees left. There were four middle managers including the director of the factory and assistant director who were removed from their posts. They were carrying out training with the other employees at the beginning, and then sent them to the other factory or company step by step. During that time, under Hua Dong electronic group of corporation, some sub-factories still needed staff, so the majority of them have now found new positions.

On the other hand, the assistant director who left the television factory after re-engineering thought the opposite compared with the Production Manager. He said that the persons who understood management and who knew technology all disappeared during re-engineering. Some of them held a vast amount of technology knowledge and went outside to find new jobs; some of them used different kinds of relationship to jump to the other organisation, creating a big loss to the television factory. They did not retain the right people, which is one reason why they failed in the end. If re-engineering could not gain collective support and participation, it presaged no vitality and was doomed to fail, according to the assistant director in a summing up of his experiences.

2) Production

The market slowly changed before re-engineering, as the customers started to use

25", 29" even 34" size television, therefore the television factory leaders considered gradually updating production. They changed television internal components and made much better quality than before, so that 21", 25" and 29" could all be produced. "If we continue keeping up this improvement, we will not have this situation", commented the Production Manager.

Unfortunately, when Hua Ning took over the reins, they still produced normal 21" colour televisions. The assistant director said, "They never innovated their production". And then the market price of television dropped even further, because of electronic parts made in the home country and updated frequently and the colour kinescope also had enough supplies. On the other hand, the manager from Hua Ning had no experience of technology, production even management; as a result, the production redesign orientation was only a conception.

The assistant director who was aware of factory management and in charge of production management had been removed from power. The Technology Manager also left during that time, although he came back after re-engineering failed, he was not able to provide more details about how management re-engineered. The Production Manager did not wish to talk any more about management re-engineering, even though he had been in charge of the day-to-day work during re-engineering. From the author's impression and discussion with the assistant director, we agreed that the Production Manager was an obedient type of person and willing to obey orders, so that he maybe did not know more details about management, but just

carried out what the superior told him. As a result, this case lost management re-engineering's main aspect.

Reasons for re-engineering failure

Different interviewees with their different viewpoints provided varied reasons for re-engineering failure, the main views being as follows:

1) Seizing market

The technology manager thought that the concept of management had some problems; they did not follow market changes during relevant readjustment. For example, when the market price changed then they also needed to follow the change; the market resources allocations varied so they also needed to be introducing relevant changes, nevertheless, the television factory adhered to the same price although the market price of television dropped a great deal. The colour television trade needs an enormous funding operation for, if produced goods are kept in stock for any length of time, then this makes funds and a cash flow shortage, so that the enterprise cannot work healthily.

During that time, the main manager considered that price drop would affect business achievement and, although the factory was leased by a contractor, this operation still came under a state-owned enterprises frame, so the business accomplishment directly influenced managerial personal promotion, most of the time they adopted

conservative ideas in order to keep the factory in stable development. As a result, they made observations to see what would happen in the next step and did not realise that the television market changes quickly and is transient, in only one or two months the price dropped by a large margin, and then there was not enough time to adjust prices so the final result is hard to imagine.

2) Employee support

Owing to personal experience the technology manager thought that no matter what reform, redesign or re-engineering was put into place it would very much affect employees profit schemes and would therefore have very little support from the staff. For a few years, the government formulation policies have had problems that have had a harmful effect on employees' profits and feelings. Most of them have a certain way of looking at things; they have strong feeling of antagonism. This is a great and thorough change compared with planned economy times, during which time, the working class was the leader, and had a high political position, and salary-wise there was not a big gap between employee and manager.

Nowadays, everything goes in the opposite direction; therefore, the employees do not have enthusiasm for enterprise re-engineering, their feelings and manner hinder the implementation of re-engineering. Although China was in the market sector of the economy for many years, people's concept still needed to adapt slowly. Because their profits were not guaranteed, benefits were unfairly distributed, impairing employees'

hard work enthusiasm and responsibility for product quality.

3) Equipment investment

The production manager stated that the Hua Dong electronic group of corporation did not invest sufficiently in equipment update and new machines. They already had three assembly lines, but the television factory managers suggested buying some advanced equipment, in order to improve product quality. For instance, they wanted to buy machines to replace workers, as for a short while emotions might influence the final product quality.

They realised that if the factory's equipment were not renewed, it would be difficult for further development; it would directly affect productive force, thus further influencing product market share. Although they knew of the problem and brought this to superiors' attention so many times, it was like a stone dropped into the sea. "They just wanted output without thinking of investment". Compared to a production time of 25 seconds per television in other television factories, they took 45 seconds; the disparity in the equipment was obvious. Owing to superiors' shortsighted view, they did not gain any investment, so they lost the capability for further development.

4) Re-engineering direction

The assistant director's analysis for the reason of re-engineering failure hit the nail on the head when he pointed out that the television factory's re-engineering direction

was wrong; his opinion was totally different compared with that of the other interviewees. He said that Hua Dong electronic group of corporation is superior in electrical light power source; the dominant position is not on the assembly of televisions. During that time, they were faced with such intense competition that they decided to take decisive measures to change the product direction, with their approval of redesign industrial structure to find a new market; they could not follow their own way to produce television. If they carried out a restructure, they could use their assembly line, employees and leading group to transfer to another trade. They could import foreign capital or unite with the strength of the domestic market.

Unfortunately, they turned the opposite way, to found their own brand "Dian Gong" instead of "Panda", and they bought a brand of "Panda" holding nearly 30 percent of production cost. However it involved prestige, marketing, quality, service, etc. and it was a long-term operation, under fast changing marketing circumstances, proving impossible to manage. This was the reason why re-engineering failed. The assistant director emphasised that if re-engineering did not combine with outside circumstances in the right direction, it was an inevitable failure and would speed up enterprise collapse. The assistant director said, with feeling, that although the television factory group of leaders saw the problems and reported to superiors, they could not take their destiny in their own hands, and they watched helplessly a small group of people steals the benefits; that was why so many state-owned enterprises ended in bankruptcy.

IT support

The Technology Manager was very concerned and thought that IT is really important in enterprise development. The television factory everywhere was vitally interrelated with IT and even negotiated cooperation with the other enterprise also related to the IT trade. They had discussions with many Universities in Nanjing in order to develop a new IT product. As far as management is concerned they also cannot improve without IT and have a regional Internet among Hua Dong electronic group of corporations, bringing about five dimensions when handling official business. Every day, they use the computer to check notices and related information transmission, such as marketing, technology etc.

"Nowadays, we cannot collect information from these enterprise locations; otherwise people will laugh at us". They gained production information and market prices from the Internet, on the basis of customer requests, and then they comprehensively analysed these to give a price that both of them could accept. Otherwise the prices at other factories would have dropped; they still quoted the same prices and caused sudden death. "We have a bitter lesson". "I do agree that IT really help SMEs development and SMEs cannot improve without Internet, which is really the normal way nowadays", said the Technology Manager, without the slightest hesitation, making this obvious conclusion.

BPR and TQM interaction

BPR is a corresponding dramatic change and radical redesign, and TQM emphasises

continuing and smooth change. To make understanding simple and clear, the author used radical reform instead of BPR, and continued reform substitute for TQM during interviews.

The Technology Manager thought that reform could not carry out radical change; they had learned a bitter lesson and suffered bad experiences from re-engineering in 1999. "I advocate gradual reform, even our country also needs to gradually reform" said the manager. There are some reasons which include: the concept changes slowly at first, under state-owned enterprise rules and regulations system and employees do not have the spirit to bring forth new ideas, but they still tread the planned economy track. Once this situation changes, that really influences their mentality and it will take a long time to adapt slowly to a real change.

Secondly, the enterprise stability also needs to be considered, if the great majority of employees work single-mindedly, the enterprise can concentrate their efforts on development, otherwise it gets nowhere. Thirdly, there is a need to consider outside environment, "you cannot draw up plans behind closed doors", if their reform did not meet the needs of general trends, it was difficult to implement. "Our reform was surpassed in 1999, although the idea was great, and the superior also gave support". The Technology Manager thought that if they could proceed step by step, the result would be another picture. He also pointed out that the enterprise could not thoroughly change staff, especially group leaders, during reform; otherwise the firm would be thrown into confusion with temporary management difficulties.

He further explained that the firm should solicit opinions from all quarters when it prepared for reform. Never look down on employees; actually they are sometimes intelligent and know the problems more deeply than managers, without their help and support, the reforms might go up a blind alley. The Technology Manager obviously tended to continue change during enterprise development, emphasised steady improvement and attached importance to employees' participation.

On the contrary, the assistant director had a clear-cut stance of advocating state-owned enterprise through implementation re-engineering and practice reform in order to seek a rebirth. State-owned enterprises have so many disadvantages, such as their owner system being inflexible; the policy making never tallying with the actual situation; the duty, power and profit never being consistent; the achievements always belonging to the superior and the mistakes to others, these show a profoundly hypocritical relationship from top to bottom etc. As a result, the state-owned enterprises need to change dramatically and turn over a new leaf.

Culture influence

The culture of Confucianism is part Chinese culture; "the golden mean" and "harmonisation" is the main section that in business management it is imperative to encounter. During the interview the Technology Manager, in high spirits stated that the culture of Confucianism really influenced enterprise change and utilised detailed practice. "We cannot intensify when we carry out reform, no matter what we have to do, we need gradual implementation". When we plan change, we cannot exceed the

concept; cannot overstep people's understanding. Confucianism taught him how to treat employees, and he sincerely helped people to improve at all times. In a general respect among television factory, the managers need to unite the vast majority of employees; from small sections, they need to build a comfortable environment and harmonious relationship with each other.

When the author asked whether the culture of Confucianism promoted the enterprises' reform or hindered the development of the factory, the Technology Manager thought that if the enterprises radically advanced, the management should not consider "the golden mean", such was the culture of Confucianism during that time; otherwise they could not achieve the goal. If the firm made further rapid progress, they needed to control the situation. During that time, the culture of Confucianism had to be utilised to help the enterprise integration.

Thus the enterprise development stage will decide the culture of Confucianism's acceptance level. At the beginning an undertaking period, "the golden mean" and "harmonisation" will obviously have an impediment effect; they need to go into action rigorously and effectively and concentrate their efforts in order to solve the main problem. They do not have time to be softhearted and to consider different aspects. On the other hand, during stable improvement time, the culture of Confucianism requires developing and enriching. It always has some contradictions and problems after the enterprise carries out reform and, as a result, the management needs coordination and to act prudently in settling a dispute and reassuring over

misgivings, so that, the enterprise can take a breather, to keep calm and composed and to face new circumstances with readjustment.

The culture of enterprises emphasises that employees should be loyal to their enterprise; to a greater extent it may influence the reform process. The interviewees thought that their staff were less loyal to their factory, they had a low concern about enterprise improvement as well as development trends, and their participation consciousness was not strong. They paid great attention to their earnings and benefits, "if we pay you one thousand *Yuan*, and the other enterprise pays you one thousand five hundred *Yuan*, you leave without the slightest hesitation". Therefore, if employees are highly loyal to their firm it absolutely does not influence enterprises' reform; on the contrary it has a promotional effect.

Under such a difficult position last time, the technology manager introduced the points that they exploited new products and worked extra shifts without remuneration or complaint, although they did that because of political concept education. They were highly loyal to the enterprise during that time; they felt that they lost face if they could not do well. Comparing this time with last time, people's opinion and manners had dramatically changed; everyone had their own ideas, which were difficult to integrate, so that the management felt bewildered.

On the other hand, under outside circumstances, employees gain different kinds of news from television and Internet; they know internal and external information, even

the policy trend. They take care about things vitally interrelated, such as housing reform, medical treatment reform etc. On the contrary, if the television factory posts notices to have a meeting to discuss the firm's reform, the employees will find varied excuses to shirk the meeting. They feel that the words of the lowly carry no weight; they cannot take their destiny in their own hands and even many middle-level managers feel indebted as if it were personal. If the enterprise carries out reform that did not try to gain benefits for the vast majority of employees, this reform surely does not have cohesion. How can they require employees to stay with enterprises through thick and thin? Therefore, the loyalty is needed to emphasise reciprocation.

Future prospects

Two sections consist of future development that includes management improvement and the factory planning. The management improvement is important in involving enterprises' future development. The television factory managers take some approaches to improve their management ability. They consider learning is doubtless the most important; they have to learn from external management concepts and internal enterprises experiences. But they have to combine their factory's characteristics with the learning; some concepts are suitable for other enterprises but not suitable for their factory; some concepts fit in with joint venture enterprises but might not have been adopted by state enterprises, so learning without integrating their own background with the actual situation is not significant. At present, the television factory managers are learning more consideration of enterprise

development and future planning.

On the other hand, Hua Dong electronic group of corporation invited various specialists to give training classes for middle-level managers every year, the group of corporations also subscribing to some management magazines from foreign and domestic sources. A vast amount of information is gained from the Internet. They also learn from their customer experiences when they exchange and share information in normal times. When they are not currently busy, the customers still frequently come to have a chat. Sometimes, they get in touch with individual entrepreneurs, as for some of them the business concept is really new and the level of quality is very high. They open their minds and obtain inspiration from discussion with such customers, so that their learning is widespread and they learn to take different ways of improving their management skills and capability, in order to lay a foundation for enterprises' further growth.

Each enterprise needs to consider how it can increase its economic results, for, without profits, discussion of anything else is an armchair strategy. From the angle of the television factory's interest, how can they develop to support so many employees' livelihoods? Currently, if they want to change the situation thoroughly and extricate themselves from their predicament, then an essential solution is reform and change of their owner system. If they continue using present state-owned systems it will be impossible to shoulder this heavy responsibility. Under their own system, the

financial affairs control by a superior is the main problem in straitened circumstances and as a result, the factory cannot take liberal operations. It has to report to the superior on its work, which includes development planning, marketing strategy, price making, etc.

The most important task needing to be considered is how to make appropriate arrangements for nearly 100 employees. The factory cannot currently solve this matter, owing to re-engineering in 1999. Hua Dong electronic group of corporations also invested a lot of money, but it did not gain good results, so that the group of corporations will not invest again. "We can understand" the technology manager said he had no alternative. Because of this production went downhill, and the group of corporations also had a desire to stay away from poor enterprises. The superior wants the factory to use its original assets and raw materials to operate survival for these employees. At the same time, the group of corporations gave an appropriate subsidy; this is a short-term action, which gives the factory transitional time. The factory managers have clear recognition and they are actively going outside to find opportunities.

The strategy of development direction focuses on enterprise alliance. On the one hand, the television factory will go through a reform to change its owned system to become an independent entity, so that it can freely control the finance. On the other hand, the factory uses its superior workshop, instrument, equipment, system management and skill of employees to unite with similar background of electric

trades, and then utilise its funding, technology, production and marketing to integrate both strong points together with development. It has met other enterprises and still persists in efforts to achieve its conception.

Case B: Daqiao Machine Factory Case Analysis

Reasons for choice of case and interview arrangement

Nanjing Daqiao Machine Factory is an old state-owned enterprise. How did they carry out reform and adopt market economy after so many years, changing from pre-planned economy? How did they change from their concept of production? What problems did they meet when they implemented reform; especially when they concurrently carried out major owner system reform? What was similar compared with the Huadian Television Factory case? So the author provides information again about the state-owned system and how it influences reform and also double-checks the existing problems, especially compared with the other owner system enterprise.

The other important reason is that the author has a good relationship with the interviewee. He is the primary manager in his factory, and has a MBA education background. The interviewee also has many years of management experience, and he clearly knows BPR theory and also pays attention to SMEs development. We discussed BPR before the author completed MPP, during that time the author still did not have a clear research direction, and planned using quantitative methods to collect data that we had discussed in varied aspects.

In order to know the actual situation and have perceptual knowledge, the author visited the factory during lunchtime. The factory has two hours lunchtime break, which is convenient both for discussions and walking around. Owing to the presence of a secret military unit, the author had difficulty in meeting the other workers or managers. However, the author considered the interviewee's position; he understands the current reform situation, as well as arranging materials; as a result, the author chose this factory as a case study. On the other hand, because of a reliable friendship, if there was a query, the author had chances to ask for help, in fact, owing to carelessness, the author realised later that she had lost sight of some useful information, so she asked the interviewee to provide more information and explain some further details when she had analysed the data.

Background of Daqiao Machine Factory

Nanjing Daqiao Machine Factory was built in 1958; it is a middle state-owned enterprise that belonged to an industrial information department and a military project. The factory focuses on research and manufactures atmospheric phenomena radar, equipment for receiving pictures from satellites. It also manufactures household electrical appliances, electrical products etc.

The Machine Factory is located beside Jiang Ning high technology development zone in Nanjing City. It occupies a space of 100,000 square metres, and the environment is both agreeable and quiet. It has 950 employees and 30% of them are

high and middle level technicians. The Machine Factory has various kinds of mechanical driving force equipment, more than 600 sets, and more than 1200 sets of instrument meters and includes international advanced standards such as American Hewlett-Packard Company's radio measurement meter testing sets, it also has the international advanced standard of the nineties' CAD (Computer Aided Design) work station and EDA (Electronic Design Automatic) software. The factory will specially develop production of necessary accessories that belong to a state-owned major project, in order further to strengthen military production development and production capability.

They are the leaders in military industry and state atmospheric phenomena. The company has the following accomplishments that have made great contributions to Chinese atmospheric phenomena undertakings modernization; meanwhile they used civil production support military projects.

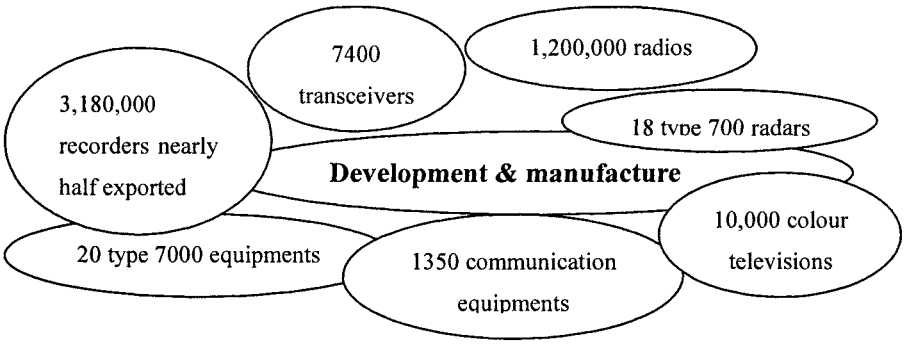


Figure 4.2: The Machine Factory development and manufacture

The Machine Factory has more than 40 products which have gained technology advance prizes and awards for high quality products from state, army, province and

city. The factory is placed in high-new technology enterprises in Nanjing City; it is an advanced factory and among the top 500 communications equipment manufactures enterprises. The state of external economic cooperation department gave them power to make independent decisions imports and exports in 1994, so that they won good opportunities and conditions for the enterprise's further development.

The factory gained ISO9001, GJB/Z9001 certificate in July 1999. The enterprise's management regulation and quality assurance system documents conform to the standard and are effective. The factory has a united leader group which goes all out for work; meanwhile the technicians are perfect craftsmen and have a realistic way of doing things. The factory policy emphasises "pledge quality, develop technology, pay attention to staff and advance steadily", "the customer is supreme, and quality is foremost" providing a high-grade service to military and civil projects.

Reason for carrying out reform

The factory is currently carrying out owner system reform; it is changing from being state-owned to a joint-stock system. The interviewee thought that this would be an earthshaking change for an old type state-owned factory. Numerous years of pre-planned economy have allowed corrupt customs and practices to become deeply rooted, causing a great deal of harm, so the enterprise started to reform from the owner system in order to trigger a susceptible nerve in every member of the staff.

The government spurs on a market economy requiring the enterprise to become

privately owned. This should bring enterprise initiative into play, encouraging the staff to become voluntarily creative and enthusiastic, and also inducing personnel to become more duty conscious as a result of owner system change. The rational owner system will bring about the owner, managers and even employees working zealously and making them feel that this reform is vitally interrelated with everyone.

In order thoroughly to change the state-owned enterprise situation, the interviewee thought that the state stock holding should be gradually withdrawn from the market, with a set up of major joint stock followed by different types of owner systems, to let everyone realise their power and duty controlled by themselves, which gives a chance for the state-owned enterprise to change their destiny.

Problems of reform

There are some problems that evidently influence the factory reform progress, even seriously hindering implementation of reform. The significant discussion here is of these problems, whether they are a general phenomenon or belong to state-owned system enterprise. The obvious problems are as follows:

1) Staff quality standard

There was much resistance during the Machine Factory reform. The interviewee said that traditional thinking and culture was deeply rooted in their old state-owned enterprise. The concept is difficult to change, as the employees become used to work

and rest alternately at short intervals. They do not realise that they have to follow market requirements; they just persist in doing things in their old way, no matter what is happening in the outside market. The employees still think that "I am working; you have to pay me money".

From observation, the author also found that one lady went for a shower; one old man sat on a chair with closed eyes, sunbathing; when we came back to the reception room, one man lay down on chairs, sleeping. These phenomenon show that the working environment is completely free and easy, but is not suitable compared with those in most enterprises working in full swing, employees look sluggish and there is a lack of dynamism in the factory. This also reflects employees' quality standards. The concept is part of personal quality, where the knowledge is not only a capability, but is also an idea of thinking. Culture background forms what they have to do and what they do not need to do.

At the same time, a considerable number of the administrators also have lower quality standards. Although the managers are required to have paper qualifications, in order to show their knowledge standard, unfortunately, because of old state-owned enterprise, many middle level managers did not have corresponding education standards. Some of them were waiting only for the time to pass, because of their working experiences and long time employment in the factory, which had given them an existence.

Chinese culture of Confucianism emphasises respect for age, especially in old state-owned enterprise people, who flaunt their seniority, and like to teach new employees a lesson. Others go through personal relationship in order to reach their position. As a result, the management group does not have the high standards necessary to lead the enterprise development in intense market competition and, although the factory brief shows flying colours in management, actually they did not achieve that standard.

2) Complicated relationship

On the other hand, because of management's complex background, another main problem appears in that complicated relationships really perplex and hinder enterprise reform and development. The deeply rooted relationship looks like a cobweb from management group to employee workshop. For example, the inspection section is of vital importance to the product quality control department; however, the manager has no special field knowledge, and not even a high school graduation background, so she cannot write final reports and frequently comes to ask for help. Owing to her husband being a leader in the army, the factory cannot move her position when it carries out reform.

If the leader sets a bad example, it will be followed by her subordinates, so that employees with different relationships work in this department. Compared with the other workshop, the job in here is relaxed and clean; people feel they gain "face". It

is hard to imagine military products quality control by this kind of people having an ill-deserved reputation. Such entangled relationships seriously influence the reform process and diffuse leaders' energies; meanwhile they are hiding troubles in continuing reform and solving problems later.

3) Government policy

Government policy also plays a role in affecting enterprise reform; the interviewee told that the situation changes nowadays; they cannot just wait for a state order as in the period of planned economy. The military products need to demonstrate qualifications every year, if the product quality is not good enough, then the state does not buy even what has been produced already but then orders from others, which makes for great risks compared with the last time. The majority of leading cadres thought it is difficult to manage; the policy change is too quick, although the interviewee thought that policy change had a positive effect, because of competition forcing the factory to change from concept to product. The factory development depends on customer nitpicking to a greater extent; therefore, opportunity and risk coexist. However, fewer people hold this view and are full of confidence about the future.

Problems solving

In order to enhance employees' quality standards, the interviewee introduced the idea that they carry out improvements step by step. Owing to owner system reform, the

lifelong tenure employee regulation has broken; the majority of them have to sign a contract with the factory as new personnel. Therefore, in accordance with this, the factory only signs one or two years contract with unimportant staff, so that they can be slowly superseded. The factory cannot directly dismiss this kind of person; otherwise, they will make trouble that will damage the factory image.

However, they still have lifelong tenure employees, according to length of service in the factory of more than 25 years; the state formulated a policy requiring them to sign a permanent contract. The factory has to provide for the aged; for it would be difficult if the factory terminated their employment, as that would hurt their feelings. "Nothing we can do for these people at the moment". The factory has to keep a stable development environment to maintain and be consistent with the government's improvement policy.

On the other hand, the factory recruits new employees from the qualified personnel market. These new employees have high paper qualifications but not necessarily working experiences and focus on new product development. Currently, the factory attaches importance to new product exploitation; it is thought to be a prop of reform by the leader. Therefore, the factory gives them a generous incentive. Firstly, it enhances wages and treatment to the new product development section. Their wage consist of three parts, the basic wage that is nothing different compared with the other employees; the project premium that requires a time limit and product quality

to exploit new products and a bonus for new product development that encourages staff creativity.

Secondly, in order to urge them to stay on, the factory assigns houses to the young staff, some of whom may work for years. This is a big attraction to them; most employees have to work hard for more than ten years or even twenty years, and then they can gain a flat. Therefore, many of the staff choose to stay, although they have to face a lot of problems. This also includes the interviewee.

At the same time, the factory uses staff who have worked for a long time to reduce inside staff, in order to cut down widespread repercussions from reform. And then the factory hires the old technicians again, although they have reached retirement age and some of them are nearly 70. Because they are the technical mainstay in the factory, the crux of the position is that the firm cannot work without them; they fill the gaps in technical utilisation. Owing to the factory economic results decreasing, the interviewee told that many middle-aged technicians moved away and that made a shortage of technicians in this age stratum, causing a temporary shortage of technical staff. Now the factory requires old technicians to look after a few apprentices, otherwise this problem will influence further development; actually, it already poses a threat to the factory.

And then the factory also uses systems of rewards and penalties to give encouragement to the staff; comparing old staff with new staff, the rewards are

different. The interviewee strongly agrees that the factory should utilise less penalties. If using punishment frequently, it will hurt employees' feelings. On the contrary, if a chance is given for employees to change, they might feel indebted and work hard later on. As a result penalties are not used as widely as possible, unless they really violate regulations and make a loss for the factory.

IT support

"Undoubtedly, IT will promote SMEs development". For instance, the interviewee introduced the thought that from new product exploitation to process, even material order and buying, these all make use of computer in the Machine Factory. The new product design utilises CAD (Computer Aided Design) software, and is directly transmitted to the data control centre, after that use of CAM (Computer Aided Management) software makes and compounds the product, in the end utilising PDM (Product Data Management) software to achieve product final design information and customer feedback to be kept in the archives.

IT is used in technology and in the processes of product design and batch production, and will also spread to financial affairs being controlled by computer. However, they have not currently started ERP. During the visit the author felt very pleased with the working environment of new product exploitation, which looks to have a modern scientific management atmosphere and forms a striking contrast with the outside and inside of the building.

BPR and TQM interaction

From the first interview, the interviewee emphasised that BPR is an advanced theory, but is not mature enough for practice even in America. He thought that BPR theory setting up is the basis of American enterprises' overall ability and high quality, with long-time experience in market economy. However, the Chinese economy is still a paced market economy and half market economy and the enterprises are still in a primitive condition of management; even Haier, the outstanding enterprise in China, has acknowledged the existence of a considerably larger gap compared with first class enterprises in the rest of the world, which includes enterprise overall capability and quality, as well as management ideas and traditional management patterns that are deeply rooted in Chinese enterprise.

As a result, the urgent matter right now for Chinese enterprises, especially Chinese SMEs, is to enhance enterprises' overall basic ability that includes strategy making, choice and utilisation, new product exploitation, technology innovation, enterprise culture building etc. to form appropriate conditions, in order to reach the standard for BPR implementation. Otherwise, BPR utilisation cannot help the enterprise in achieving the desired results, and even makes a negative effect.

The interviewee considers that the factory's overall capability is not strong enough, especially in new product exploitation and current market research. He thought that their factory carried out continued reform; the radical reform seems to be a big action that the factory cannot adopt at present. They concentrate on individual problem

solving and have not the ability to see the overall picture. The top management is like firemen shuttling back and forth to put out a fire, they do not have time to take in overall arrangements, because of the old factory, where the problems come thick and fast.

On the other hand, the interviewee thought that because the factory economic results were in decline, the director of a factory frequently changed also the policy of development, which thus had no continuity. Again, the leaders want to keep a stable improvement during their term of office. They take care for their personal future rather than the factory's development; even if they fail in management, they can still become a leader somewhere without undertaking responsibility. Therefore, they always avoid carrying out big alterations.

In order to retain their position, the middle-level managers choose to keep silent. They felt it not worthwhile to make suggestions for factory reform, not knowing whether the new director will gladly adopt them or not, and not wanting to suffer from their own actions. As a result, the top managers should have a strong sense of duty and farsighted vision to implement reform, especially dramatic change to lead the factory in overcoming difficulties, and then to advance with big strides. However, the owner system obviously cannot develop this kind of leader, so the reform cannot avoid a twist and turn destiny.

After a friendly discussion the author asked the interviewee whether radical reform

and continued reform were divided into different stages of implementation, or if the enterprise basically kept a stable development. The interviewee thought a while and gave an affirmative answer that reform should be carried out separately in different stages. Owing to the objective being different at each stage, the reform will centre on each objective-also, every enterprise has its own development planning in different periods, which makes it impossible to go down one avenue only. Although the Machine Factory does not currently implement BPR in a real sense, the interviewee did agree that they carried out some radical changes previously.

Culture influence

The interviewee without hesitation thought that the culture of Confucianism has a hindering effect on enterprise's reform. The Chinese follow a middle course in everything that makes it very difficult to ask them to go forward. So that they do not dare to exploit new products, if they think the technology can be used, they will still use it without innovation. They do not want to advance rashly, being afraid of making wrong decisions and worrying about self hurt. The culture of Confucianism taught the doing of everything following "the golden mean", which means 'do not lean too far to the left or to the right; always try to keep a middle way'.

The consciousness of innovation is not strong in the Machine Factory. Among such a kind of cultural atmosphere, people tend to be conservative about doing things, in order to avoid losing 'face' if they fail to innovate. This circumstance also occurs in

the leader of the factory. Being a vigorous reformer means he has to undertake risk and normally people do not act rashly when they are in a new environment. Under state-owner system, they seek a stable development that is perfectly safe, while the leader wise about personal survival rather than personal reputation is ruined if he failed implementation of reform.

The culture of "middle course" still influences people's thinking, choice and action when they face gains and losses. For instance, the interviewee introduced the idea that the reform carried out in the Machine Factory did not influence the logistic department. From the angle of Chinese culture as well as sentiment, the top management agreed that this reform should be slowly implemented and if possible should refer to less people; it has unconsciously to influence staff to change. As a result, the interviewee thought that the culture of Confucianism hindered the current factory development, but it is hard to say if it still negatively influences the factory completing reform.

From an enterprise's culture aspect, the interviewee agrees that employees are loyal to their factory, which not only affects the factory's reform but also affects promotion. Because employees are loyal to the factory, they want to have factory development; it shows in their working overtime without seeking either fame or wealth. However, the interviewee specially emphasised that loyalty needed reciprocation; on the one hand, employees need loyalty to their enterprise and on the other hand, the enterprise

also needs honesty in treating its staff, from this point of view, "if the factory does not care about employees, how you can ask them to exert every effort". The responsibility and obligation apply both ways. "As a leader, if you always consider employees' benefit in your mind, you can never lose support".

However, every enterprise has cliques, especially in old enterprises where there another meaning of loyalty. This kind of clique includes master and apprentice relations, friend relations, relative relations etc. these relationship form small groups. If the factory reform offends this kind of clique benefits, they will offer considerable resistance to the factory change. As a result, how can the leader handle this matter with propriety when it is a test of top of management leading skills? They should always realise that "punishment of one person will bring resentment from that group", therefore the right lead is to add some persuasion, meanwhile using a bonus system rather than a punishment method, which is a desirable way to solve this problem.

Future prospect

The management improvement is the guarantee of the factory's further development. To be honest, the new director does not pay attention as to how he can improve current management capability; the interviewee introduced the thought that the director wants a concentrated effort to exploit new products, in order to keep ahead of the market. On the other hand, he encourages management to keep on studying; he allows top managers frequently to visit similar enterprises and attend meetings of the same profession and exchange experiences. From visiting others' factories, they not

only share management experiences and exchange technology, but also keep abreast of the recent development trends.

Moreover, they attend a military production exhibition under a state arrangement every year, so they can mutually study and exchange information. However, improving oneself can have many forms and can always be managed by themselves, the interviewee thought. As top managers should realise that knowledge needs to be kept updated, meanwhile they should have keen observation ability to learn from each aspect.

At present the director uses exploitation of new products as a breakthrough to keep the market, in order to avoid being superseded in fierce competition. The Machine Factory depends on the government policy slant for support from the previous time. Now they have the feeling of impending crisis and pressure for survival, so they develop and make series products. Owing to production specialisation and market competition, their products such as colour television, radio and tape recorder all ceased when the products declined, and as a result, they need to expand the type of production, making more choices for customers.

If they exploit one new product, this can be made in a new section. This new section becomes an independent unit to make a profit for the factory, and meanwhile helps the factory arrange for more employees working. The new section directly faces the

market, so they have clear development direction, and the production arrangement is quicker to follow market requirements. As a result, the factory cuts down the burdens, meantime setting aside some time and energy for making another development plan.

The other step is to develop overseas markets. The factory has a foundation of production, exploitation and quality guarantee management systems, and they consider developing the Southeast Asian market first. After they attended the trade fair and exchanged product information with customers, they realised that their products are advanced. So they can use their superiority of product quality, price, function, etc. to win the market, their military products shifting to civil use which has broad prospects.

Owing to the new director needing to stand firm in the factory, he focused on exploitation of the new product first. In order to gain results he quickly stamped his authority and leading ability. Meanwhile, he is devoted to enhancing the factory's economic results, and seeks for development of direction to establish confidence for the employees. As a result, he built a reformer image around the factory. In order to reduce resistance of reform, he puts off administrative department and logistics department reform, even management pattern reform, it is predicted that further reform will be carried out later on, which does not rule out the possibility of dramatic change and radical redesign.

Case C: Zhuqiao Printing Limited Company case analysis

Reasons for choice case and interview arrangement

Manufacturing industry consists of equipment manufacturing and processing manufacturing. The choice of the majority of cases in this research tends towards equipment manufacturing. Jiangsu Zhuqiao Printing Limited Company belongs to the latter only. The author wanted to know the processing manufacturing and how they carry out reform, as they are less involved in innovation, creating, IT use, etc. What problems do they face when they force change? Many of the processing enterprises owner systems shifted to nongovernmental business; what are the differences compared with state-owned enterprises, etc., which is an important aspect to improve this research generalisation?

The author through her classmate was introduced and arranged to visit the company, at the same time as carrying out an interview. Owing to friendship and working relations, the interviewee gave an enthusiastic welcome to the author, although he was busy at the time. The interviewee is one of the company's shareholders. He is currently in charge of financial affairs, which means he has power and knows the overall situation. He provided some useful information, helping to fill the gaps in this research, so we have a chance to realise what happens in their organisation.

Background of Zhuqiao Printing Company

Jiangsu Zhuqiao Printing Limited Company belongs to the Jiangsu provincial

geology minerals office. In 2003 they opted out of owner system changing to nongovernmental business. The company currently has fixed assets of more than 20 million *Yuan*; they have office and workshop areas of 2500 square metres. Meanwhile, they have complete printing equipment and machines that include advanced printing machinery from Germany.

Zhuqiao Company was founded in 1988 and went through three stages: the major company took single offset printing between 1988 to 1995; from 1995 to 1998 the company became a colour package printing enterprise; and since 1998 until the present time, the company has developed to colour packaging and periodicals and is a sample of middle-sized enterprise, for four continuous years it became Jiangsu Provincial purchasing centre after being the successful bidder out of ten other competitors.

The company is a stable printing enterprise of provincial level books, publications and newspapers; it is well-known among provincial different government departments and the printing trade. For instance, *Jiangsu Economy* magazine gained a good printing award out of ten competitors in Jiangsu province from 1999 to 2000. The company set up a financial department, business connections, a production arrangement section, etc. The company is constantly improving quality and provides a varied service, in order to give customer satisfaction.

Owner system change process

Zhuqiao Printing Company was previously a state-owned enterprise. At the beginning the provincial government invested 500,000 *Yuan*, and then developed until 1997 when they changed to an owner system, from state-owned enterprise they shifted to joint-stock company, in order to invest equipment and materials worth 2.15 million *Yuan*. Meanwhile, the enterprise benefited after investing 380,000 *Yuan* again, and then the enterprise registered once more as Jiangsu Zhuqiao Printing Company, having 80 employees at that time. This was the first step of change of owner system.

Owing to Zhuqiao, the founder, leaving in 1999 making the company was put into a state of flux, changing the leader every year. In 2002, the high authority asked Zhuqiao Company to carry out capital re-engineering. In Nanjing City printing enterprises, there are two printing factories that belong to the same department, and to solve amalgamation of organisation was the first purpose of the superior's thoughts. There are 25 staff belonging to different kinds of organisation and the superiors want to pass through re-engineering in order to reduce staff. On the other hand, the company is certainly well-known among Nanjing City printing enterprises, so the higher authority planned to establish a really independent enterprise after re-engineering.

The capital re-engineering did not have a good result; the leader did not have the right thinking. Zhuqiao Printing Company combined with the other printing factory. The superiors sent some leaders to the company, as they were interested in printing

equipment, as the company has 9.25 million *Yuan* worth of printing equipment. They did not want to carry the burden of caring for employees; therefore, the leaders came from outside, causing trouble with Zhuqiao middle managers and employees. Meanwhile, Zhuqiao's management did not want to be annexed by the other printing factory. They were not happy with the re-engineering and this did not form a basis for sincerity or equality. As a result, Zhuqiao started a change of owner system for the second time.

In July 2003, Zhuqiao's original managers went to the higher authority to ask for a change of owner system once again. Nine independent people decided to buy this company, after discussion with the superiors and evaluation of the company's property; they used only 890,000 *Yuan* to take the company that has 1.21 million *Yuan* net assets, and the company owner system changed to a nongovernmental joint-stock company. The higher authority thought that they would carry the burden over a long-term, although they lost vast capital. Now the company used change of owner system as a way of easy shifting money from public to private ownership.

Existing major problems

Some problems existed over a long time even now they still seek a way to solve or improve; these problems not only reflect this company's trouble but also show a universal phenomenon existing in Chinese SMEs.

1) Applying for loan

The interviewee was very concerned to apply for a loan this is the main problem existing in Zhuqiao Company. Owing to the interviewee being in charge of finance, he negotiated with banks over a long period but was told that the banks never directly provide a loan; he had to find Guarantee Company first, and then ask them to apply for the loan from the bank. The company wanted to use 9,470,000 *Yuan* worth of equipment as a guarantee in order to apply for 800,000 *Yuan* loan, comprising nearly 8.5% of the assets, but they still did not achieve what they wished.

Not only did three big state banks refuse them, but also the majority of business banks did not offer their hand to help. The banks never provide timely help, especially to nongovernmental business SMEs. However, the banks asked the company to use a private house as a guarantee, in order to apply for a loan, which made a high risk for the shareholders and they failed to reach an agreement, so cash flow is a major problem obstructing the company's survival and development.

Meanwhile, they might plan to borrow at a high rate of interest from nongovernmental organisations, but this is a high risk practice, meaning that nine of the shareholders were of widely divergent views, so they were in a difficult situation at this time. The interviewee said that he did not pay money to the suppliers on time; there was a delay of forty-five days in settling accounts, although this violates financial regulations, so that they could keep the cash flow "ticking over", but they still need to seek a way gradually to improve fund turnover, in order to accumulate

some funds to allow further development.

2) Status unclear

This problem may exist only in Zhuqiao Company, because their employees were composed of different organisations. However, it reflects a phenomenon that is in general existence in two different types of organisation. The essence of this phenomenon reflects the social unfairness and institutional irrationality.

As mentioned earlier the company has 25 employees belonging to the organisation, which is an affiliated organisation of government. In principle this kind of organisation does not earn profit. However society cannot work without this kind of organisation's existence, such as: schools, hospitals, etc. they are called "*Shi Ye*" organisations. If people belong to "*Shi Ye*" organisation, then after retirement they can gain one or one point five times pension compared with in other types of organisation.

The other type of organisation makes a profit, which widely covers the majority of different types of job, and vast numbers of employees work in this area, which include factories, mines, etc. they are called "*Qi Ye*" organisations. This policy hides the facts until the employees' retirements loom, making the majority of employees emotionally unbalanced and feeling unfairly treated. As a result, people do everything possible to join the "*Shi Ye*" organisation when they realise the

consequences of artificially making society contradictions intensify.

However, the 25 employees in Zhuqiao Company could not strive to get back to a "*Shi Yi*" organisation establishment, so they asked from the higher authority for compensation for their loss, which was a very time consuming affair, they have not gained any results up to now, so that they carry a depressed mood to work that really influences working quality, and also affects the other employees' emotions.

3) Management lagging

The interviewee thought that Zhuqiao Company had an internal management problem of lagging behind and further explained that SMEs either carry small type management, or the manager reaches his position through relationships, and then uses moral standards to suppress others. From financial management, examples show that SMEs have no standard or system of management. The government does not attach importance to SMEs, which do not have any successful management pattern to use for reference. The majority of SMEs will change their business direction to gain more profit and trade. After they earn money, many of them do not have any further development planning. These SMEs' drawbacks can be found in every aspect of the company. If the company depends upon these ideas to carry out management, then the company cannot develop further.

Moreover, SMEs recruitment of employees is not working strictly according to

guidelines, as relationships play a main role during recruitment, some technical workers using certain relationships to join the company, the remaining general employees consist of peasants, so when the company first considers reducing costs first, it cannot avoid causing employee quality to be universally low. Communication is difficult in this company, and obviously exists as estrangement among employees. Now the company gradually supersedes some administrators to optimise management team. Meanwhile, it carries out training of employees in order to seize the opportunity of application of IS9000, in order to improve management standards and employees' quality, thus meeting the needs of reform.

Marketing reform

In order to solve existing problems of the company, they decided to print publications to help gain market share, as the publishing business has sufficient work to ensure their machines operate 24 hours. Meanwhile to reduce risks and guarantee money coming back, they met swindlers of all kinds when they received printing business from different channels, which resulted in some loss. To go into low cost operation and market needs, they will increase black and white printing next year.

Moreover, they considered utilising features printing at the back of the working procedure. For example, they print brighter figures and cover them in film, making their books more artistic. This feature printing has certain technicalities and also makes more profit compared with general printing. However, this planning involves

funding problems again that give them a real headache.

The interviewee told that the company considered current equipment capable of production that is still not brought into full play. This is because of the intense competition, as there are so many printing enterprises in Nanjing City. After they went outside visiting similar professions, they found that the packing trade has bright prospects in Nanjing range. For instance, the moon festival is coming soon (during interview), and the interviewee said that the traditional food moon cake packaging looks like a work of art which bestows cultural meaning to the moon cake that cannot compare with previous packaging, although they also receive this kind of business only in a small way.

On the other hand they plan to attend the trade fair in Guang Zhou in an endeavour to gain orders from overseas customers. If they can assure product quality then payment will not be a problem. If this type of business can be obtained on a long-term basis it will be of great help to the company's development. However, this is only in the planning stage without having been put into practice, as there have many other problems to solve at the present time. However the interviewee hoped that they would be able to carry out the proposed plan and put it into practice.

IT support

IT developed quickly and the interviewee thought that the company needed to set up

its own Internet, so that the customers easily know of the situation and are able to contact it. IT is vitally interrelated with the printing trade. For instance, the pictures pass through Internet and that saves them a lot of trouble. They use a computer to design the picture first, and then send to the customer; after the customer confirms it, they start printing. It looks like an assembly line method to finish all the jobs, which avoids carrying a sample to ask for agreement, as in the previous working style.

IT is also able to develop its full ability in management. The company will carry out an optimisation production process by computer software management, which from the start of the order arranges production that includes paper, ink, machine, etc. and then to the completion procedure that covers price, customer, cost, etc, the whole of the production process controlled by computer. Therefore, the company will reduce some staff (as private enterprise cannot support loafers), meanwhile improving management efficiency. This software system costs only 10,000 *Yuan*, so the company will put this into practice soon.

BPR and TQM interaction

SMEs reform has to be on the basis of society altogether changing. The interviewee thought that the society environment is like lukewarm water, it does not change so quickly but it is on the march. Each enterprise seems like a small boat to sail in the sea; if it does not follow outside environment changes, the small boat may capsize. It is easy to understand if the boat goes fast without adopting outside environment

development rhythm, because of lack of understanding and support, the boat will soon land itself in a predicament. The contrary circumstance is also tenable. Therefore Zhuqiao Company follows outside environment in order to change throughout the journey.

However, the company has carried out owner system reform twice, which is a drastic action, and the interviewee told that because of popular conduct among enterprise reform this was encouraged by the government. If the company does not implement owner system reform, it could not survive; the superiors do not want to fulfill previous obligations to the employees. "So we do not have a choice, we are forced to make a desperate move." To be honest, the interviewee thought that the company carries out any change following the outside environment; they do not want dramatically to change unless they could not survive.

For instance, this area is to pull down old houses that will influence the company soon. The local government may ask the company to move; it will negotiate for compensation from the local government. If it does not gain compensation, it still has to move, and cannot say "no" to the government, but this situation will break up Zhuqiao Company. As a result, they may reduce business scale to shift to the suburbs. This is another sad story of how the outside environment affects the company and forces them to make drastic changes. However, the company is prepared to accept the challenge although it feels unhappy.

Culture influence

In any organisation the different departments need to try and harmonise with each other. People need to communicate with one another regarding education, family background, divergence etc. and to discuss and settle any contradictions that may include customer, executive bodies, landlord and neighbourhood committees, as all these groups will need to negotiate.

However, the harmonisation also builds on a middle course, the interviewee emphasised that as ordinary beings we cannot be either exceedingly clever or dull-witted; you have to strive, you must try-if you cannot gain, then you cannot force it. For example, the interviewee said that their company asks for compensation for moving. It cannot ask for 10 million *Yuan* compensation from the local government, but might ask 1 million or 1.5 million *Yuan* compensation. That is enough; they have to work with objective reality. Therefore harmonisation and middle course can be used in a two-sided practice.

On the other hand, the harmonisation and middle course also cause hindrances for enterprises improvement and development. If people always use harmonisation and "the golden mean" to deal with affairs, it makes people engender inertia. Some things which have to be discussed with staff must be carried out in a subtle manner in order not to cause resentment.

However, the company already set up rules and regulations, when they implemented

another matter. For instance, the rules stipulate starting work at eight o'clock, but usually employees come later, five, ten or fifteen minutes varying in time, and because of the regulations management cannot reproach the majority of people. If the production manager checks frequently, then the situation will improve, otherwise after some time everything returns to its old ways.

The company cannot simply terminate employees' contracts, as it has to consider various kinds of relationships, and relationships are always difficult to deal with in organisations. Everyone uses different ways to find a mental balance, if they are not promoted, and the managers think that it is hard to give up so many things. "In this sense, the Chinese culture of middle course really hinders the society development" the interviewee gave this as a definite opinion.

From the viewpoint of enterprises culture, which is to emphasise employee loyalty, the interviewee thought employee loyalty sometimes also impedes the company's development. When employee loyalty evolves to defend small group benefits, the loyalty changes in the right direction. Normally employees uphold their team benefits rather than the enterprise's profit; they are loyal to their group leader rather than the enterprise's progress, especially if the company reform offends someone's benefits.

Owing to SMEs employees having certain relationships with each other, a slight

move in one part may affect the situation for a while, or at least will influence some of them. As a result, they have to consider beforehand how they can solve this problem; either this group people are to be got rid of, or they will try to meet their demands, if they are not excessive. Sometimes they also need to consider tactics and relations.

For example, they have one member of staff who has to seek business for the company. In nearly one and half years he gained no business, but because his father was a leader and their superior, the company kept patience for one and a half years before dismissing him. Therefore, *guanxi* plays a main role in harmonisation among subordinates and superiors, without compromise, sometimes the company will face troubles, although in this case someone had wanted to expel him after one month as he had not gained any business.

Management improvement

The interviewee agreed with the author's opinion that management improvement is very important for enterprise development. The company passed through some training from Nanjing City printing and Jiangsu Province printing association. Sometimes they were invited to attend series of lectures from experts. Meanwhile, they exchanged experiences with the same professionals regularly, and learnt from them advance management patterns.

On the other hand, the interviewee emphasised that managers have frequently to go

outside to have a look, to broaden their horizons; in particular, they have to visit developed countries to know how they carried out printing; where they are different when compared with American and Japanese printing; etc. As leaders of the organisation, they have to keep learning to understand the overall situation of the printing trade; they cannot just look at the domestic market.

For instance, they think that their printing machines are advanced; in fact they might already have been superseded abroad. Owing to the printing trade investing in machines and equipments, this is more important than technical innovation, therefore the company has to have sharp eyes to catch the popular tendencies of the printing trade and to know the present state of printing equipment. This requires managers keeping steady learning of improvement.

The market reform actually is in the company's future planning, they want to make some changes in the market section; the majority of planning they still do not carry out. The company faces removal problems, and also will have to take some time to solve troubles afterwards, such as: transportation, cost increases, fund shortages, etc. Therefore, they still have a long journey of hard work for their survival, and seeking of development.

Case D: YuYue Medical Equipment Company Case Analysis

Reasons for case choice and interview arrangement

Jiangsu YuYue Company is a quite successful medium-sized enterprise; the company ownership is private, which is different compared with the other cases. What are their guiding principles to lead the company development? What do they focus upon? How do they carry out the change process? Etc. The author talked through with the owner and realised that this case represents a significant difference from the other cases, how the family manages control and leads this company's development.

Moreover, the author is amazed how a small satellite town has such a successful enterprise, and wonders if the owner has conservative ideas and advanced thinking in coexistence. Owing to good friendship, the author has twice interviewed the owner, although he was really busy at that time, which made the author feel apologetic. The first interview was arranged before MPP, so the author gained some brief ideas about how the company understood BPR and closely related topics. Owing to lack of interview experience, the interviewee led the interview during that time, so the author realised that she did not gain valuable information, and she planned to disregard this case after the first interview.

With the research direction clear, and after interview with the other companies, the author found that the owner's thinking and opinions have a special feature, which represents some organisations' management pattern and development tendency.

Therefore, the author came back to ask for an interview again, she changed the interview questions this time, and learnt lessons from the previous interview as to how to control the process and guide the interviewee. So that the information gained from both interviews could be mutually complementary, this provided wide range data for this case analysis.

Background of YuYue Medical Equipment Company

YuYue Company was established in 1984, it specialised in the research and development, manufacture, and sale of medical equipment and family health care products. The company has nine big types of 80 varieties of product, the main products being as shown in figure 4.3. The company has 80,000 square metre workshops; meanwhile they import international advanced management concepts and manufacturing process to carry out production. They own a predominantly manufacturing and working environment and modern numerical control manufacture equipment and production line. Overall engineers, technicians and more than 50 percent of workers receive training from American and Japanese medical equipment companies. YuYue has become the biggest and an efficient base of producing medical equipment in China.

"Quality casts brand", YuYue Company pays attention to technology content and quality control during production. The YuYue sphygmomanometer was selected "China top brand product" in September 2005. They won various quality system certificates including FDA U.S., CE Europe, SG Japan, TUV test Germany, and

ISO9002 China certificates. It has been selected as "Jiangsu famous brand products" enterprise in 2003. Depending on the high-grade products and service, it has established a sound marketing network throughout China. The output and sales volume of the YuYue main products are on top in the mainland. The company products are also known very well by international colleagues and it is a strength that cannot be neglected in the supply chain of international medical equipment.

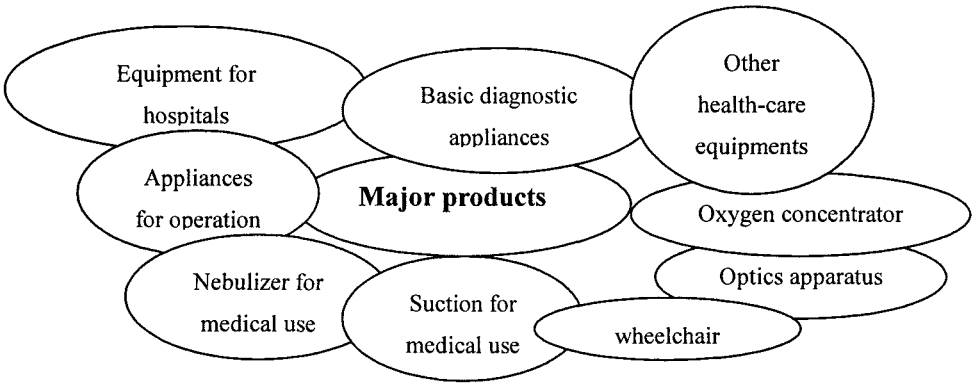


Figure 4.3: YuYue Company major products

YuYue takes part in international cooperation. Over the past several years, the company has set up the following companies in Figure 4.4. Meanwhile, the company has utilised global resource, technology and information fully, and established global purchase system and a materials circulation platform, so as to promote to improve technology skill and global marketing. The company is a broad collaborator in research. Now it owns four holding companies, it has established research department both inside the company and in Taiwan.

The aim of YuYue is to gather talents of high quality both in mind and skill, implement individualised and cooperative management, through international expansion to establish the leading status in the medical equipment industry, create excellent economic and social benefit, and, based upon it, create a loving, trustworthy and reliable YuYue healthy family.

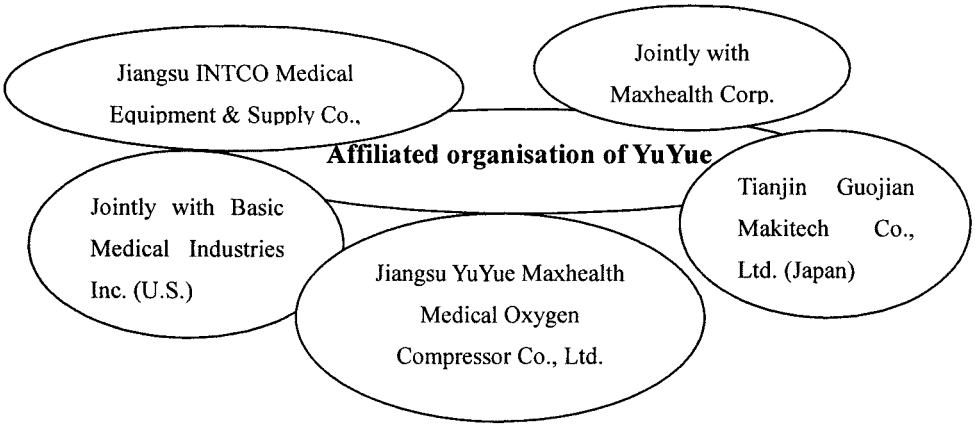


Figure 4.4: Affiliated organisation of YuYue

Concept of reform

The interviewee emphasised time and again that the company never advocated dramatic change or drastic reform time and again. He thought that enterprises could not carry out big change for a few years; frequent reform shows enterprises are unstable and unsure of themselves. He further explained that the company carries out reform every day covering all details. The company reform involves different areas and various people, even if each area has dissimilar reform concept. Maybe people can tell how a few years ago this company changed, and after a few years how they developed as well. Actually, the company's departments never stop fluctuating, but approve of small change driving big reform later on, and they appreciate slow change

rather than the sudden use of reform.

The company reform should be based on a pattern of conservative change non-stop. Some reform theories came from the West, which shows a big gap when utilised in practice in China, it is unaccustomed to the climate of a new place. For instance, Californian ginseng is well-known, because of its sunlight and environment improving the strain of ginseng, if transplanted in China it may become a "carrot" (the essence function be changed). That is the reason why some foreign theories are fashionable, but when used in practice, this would have no pragmatic value, if the company did not adjust the theory based on the actual situation.

In a broad sense, BPR theory is useful in large factories; the interviewee thought that owing to SMEs limited resources, the re-engineering did not bring about remarkable success. It might have some effects during enterprises initiative stage, but has no broad utilising prospect, under stable law finance and taxation circumstances, especially if the enterprise development reaches a definite level. YuYue Company thought that SMEs' process was uncomplicated therefore BPR seemed unnecessary, at least in their company.

The company emphasised continued change, which should entail change based upon predecessor to make amends for their weaknesses by exploiting their strengths. The interviewee disagreed about reform without continuity; otherwise the company

cannot make any accumulation. Humanity progresses because every generation accumulates knowledge; on the contrary, animals repeat their lives without accumulation without progress. This opinion applies to every enterprise; even the state also needs accumulation for further development.

Concept of development

The interviewee incorporates practical experience in comprehensive analysis that SMEs should clearly know their orientation, compared with a large enterprise culture build, where resource management and value concept all need to change. The theory emphasises that the customer is primary, but "we absolutely cannot persist that the customer is primary", the small firm cannot become an individual. American enterprises are global, so their individuality can concentrate on batch production, which might have two customers in China, and "how can we carry out individuality?" Therefore, SMEs cannot focus on "customer is primary" and "customer is supreme", the concept has to change.

SMEs cannot bring forth new ideas, and the interviewee further clarified that SMEs blazed new trails, which have a price to be paid, to this end many enterprises close down, because their resource and capability are limited and are not consistent with the enterprise development direction. A lot of companies cannot make high-technology products, and still cannot reach the standard, as in human resource, management, etc. How can SMEs seek "quality foremost"? Maybe they cannot go in

for this, if their ability cannot match "quality is foremost" with the enterprise's overall resource. However, "we totally run counter to the theory".

SMEs development direction has to choose between specialisation and serialisation, which cannot become many-faceted; the interviewee thought that the enterprise's product should determine the nature. For instance, the cutting discs are used by equipment, and the electric tools are used by people; both products affect directions and are different in the end. People need to consider quality and technical competence when they produce the cutting discs. For the electric tools, people have to think about aesthetics to add consuming concept to the product. Therefore the enterprises decide a development direction and the product determines the nature, which are both important when judging where you want to go.

YuYue Company formulated the strategy of development of consistent implementation; they were established to make a brand in the domestic market, and to make quality in the overseas market. In the home market, the interviewee explained that they not only sell the product, but also sell the product's extra-value, which the brand brings about in the product's culture, standard and service. On the other hand, in the foreign market, they have to focus on product quality, because they do not have their own brand, sales network, research organisation, etc. So they only can make the product that the customer has appointed already, so the product quality needs to be great and the price cheap compared with production in the Western world.

In order to achieve a development concept, the company gradually builds enterprise culture to meet the needs of progress. The culture build helps the company to complete core concept of "quality casts brand", so that the company's development concept and enterprise culture compliment each other. The company expends all its effort in building enterprise culture, which is a significant aspect in their growing history that will be detailed later.

Concept of management

The interviewee left a deep impression on the author with the talk about family business, without mentioning this topic; he does not allow others to butt in "60% of SMEs are family business". SMEs needed family management when they started an undertaking, under that particularly difficult situation, the family member could give up treatment and funds, so that the enterprise could accumulate funds. Meanwhile, the family members put in a lot of hard work and extra time without remuneration, because of their contribution, the enterprise could tide over a difficulty.

Evidently the interviewee did not like people arguing about family business in front of him even if he was very susceptible to a great extent. He hung his father's portrait in his office to show his power ran in the family. On the other hand, the interviewee also realised that when the enterprise development is in a certain scale, the family members' quality cannot compete, the enterprise needs slowly to change the owner system. He started sharing parts of stock with managers, in order to encourage them

to work hard. The details are narrated in the section of the company culture build up.

Currently, the management of YuYue Company is summarised in three words. First, the company follows market development trends; everyone has clear objectives and a sense of urgency in an intensely competitive market. Next, the company uses finance as a centre; the data of management should come from the financial centre. Then, the company takes quality as a development foundation; staff always bear quality in mind, to improve personal quality and product quality as well. In every aspect there still exist various problems; the company needs to continue improvement rather than dramatic change.

Problem existence

The interviewee thought that YuYue Company formulated the objective, which is not high compared with the other enterprises, therefore the company is currently basically sound. However, some trivial problems always exist in different departments and workshops, that are normal in every organisation. Of course, if the company improved in its further steps, the interviewee told that their human resource could not follow the development pace; the high quality of technicians and administrators was not sufficient.

The quality not only includes personal capability, but also covers mental ability. Some people have ability, but they do not give full play to their professional skill,

they might do this unconsciously. Therefore the company has to build an appropriate enterprise culture rightly to guide them to bring the initiative into full play. Employees seem to be as motors to managers; they have to distinguish whether this motor needs petrol or diesel oil, if the needs and supply are different, then the motor will be destroyed.

Enterprise culture build

Another deep impression on the author is that the company pays attention to the enterprise culture build up, on the one hand, the owner does not like people to touch family business topics, showing his conservative ideas, on the other hand, he realises the importance of promoting enterprise culture, which displays his advanced management consciousness. Both contradictory concepts integrated within one person is a process of progress, and is a trace of improvement.

What is the meaning of enterprise culture? The interviewee from his practical experience viewpoint explained that enterprise culture cannot be measured, it is an invisible asset, but it plays a main role in the process of a successful company or one which is not successful. The enterprise culture is judgement of what is right and what is wrong, coming from the bottom of the employee's heart; it is a choice of what is good and what is bad, and is something coming from bottom of heart.

If the company has a bad enterprise culture, where the management thinks what is

right and the employees consider what is wrong, the standard of judgement and choice are as wide as the poles are apart, and it is almost impossible to keep consistent with the company of the management. There are many aspects that depend upon enterprise culture, such as why do so many people need supervision. If the company has the advantage of enterprise culture, the employees do not need supervision, and they are self-motivated without control. Otherwise even to install a camera in the work area will make trouble, as they do not worry about what they consider trifling matters. For instance, if a tap is turned on then it will not be turned off. Items that have been made are not handled in a careful way and instead of being put down in a careful way they may be placed in a heavy handed manner. Under the same design, facilities and investment the results differ. Because the enterprise culture plays such an important role one article comes out as a "duck" and another as a "chicken"

The interviewee emphasised that SMEs culture cannot copy large enterprises; he thought that the concepts have to change and ideas have to be creative; the enterprise culture needs an unconscious influence on the staff. In China's fixed position in manufacturing industry, however, every employee wants to become boss in the factory and no one strives to be an engineer. Therefore the organisation has no culture atmosphere to impel every worker to become an engineer; otherwise it is impossible permanently to engage in manufacturing industry. As space is limited, this case only touched part of the enterprise culture about technological atmosphere. This

is also the main aspect that the company wants to achieve its objective.

YuYue Company not only looks at profit, but also trains a technical group. They decided to found an "engineer association", and the first enterprise library in this city. The company allows engineers to enter the library for free reading, and also supplies refreshments. They make an atmosphere of respect for engineers, in order to train high-quality technicians and skilled workers, otherwise the company has no technological atmosphere, and discussing further development is idle talk.

SMEs might form a complete part of the large group, how can they improve the product that the large group cannot achieve at their level? The high technological content and efficiency are core competitive advantages, and, as a result, the company pays attention in encouraging employees full of enthusiasm for their work and for becoming engineers, with their dreams of the company's further development.

In order to ensure everyone is working with enthusiasm, YuYue Company pursues a series of wages reform policies. These policies reflect the company paying attention to the technicians and older staff, and at the same time carrying out a standard of wages built and presented, in stepped sequence, to the group leaders. The general reform objective is to establish a standard of wages in various jobs, on the basis that, if employee works for more than three years, the company will gradually add a subsidy depending upon length of service.

Meanwhile, treating technicians and skilled workers, who have speciality and creativeness; the company evaluated their professional title and then hired them for work in a different position. YuYue Company uses the method of inside evaluation to select their own engineers and technicians, the rewards are not only a technological subsidy, but also free medical checks, paid holiday, etc. and a welfare policy, in order to make a strong atmosphere for the company's respect for the technical and talented person.

Moreover, the company sets up a reward fund for those bringing forth new ideas, thus encouraging employees to be creative. As a result, the company is full of an interesting technological atmosphere, various creations springing up one after another. Some creations not only make economic results for the company, but also have rich material rewards and extreme honour for themselves. For example, the research and manufacture department designs the 7F composite type of silencer, and then fits it up in machinery, and it is efficient in reducing oxygen machine noise. A patent has been applied for this silencer.

In addition, the company plans to take a branch that has desirable economic results, to allow the company's mainstay to invest some stock in this branch company, so that they can gain more benefits from the company's economic results, to bring everyone into a positive factor of play. The interviewee thought that the salary was enough to keep the company's mainstay in YuYue, although some of them, who stay in the

company, are working without all their heart and all their might.

Once again the interviewee further explained why the company shares their benefits with staff. The company considers that some of the advanced staff are working without thought of money, so the company gives them more duty and honour to promote them. However, the majority of employees are still concerned about money, so the company provides more benefits for staff to encourage them to work hard. Therefore the company has to build an enterprise culture with a three-dimensional effect.

One dimension of the culture is thin and weak; when the objectives are achieved people do not know what they want to do for the next step. They do not have enthusiasm, so the company has to bring something exciting into play every day. To accomplish this, the human resource department needs to understand employees' ideas: what do they want; why are they not in a certain condition; what excites them; the company hopes their staff come to work in an enthusiastic way.

The interviewee told that the company uses welfare, wages and guidance as a three-dimension to influence employees' behaviour, and then to control the overall circumstance of the company's daily work. The company through an enterprise culture in the long-term, builds efforts to develop employees so they have a clear objective in their life. This objective is not gaining 300 *Yuan* this month or 350 *Yuan* next month. The company wants its staffs to have the concept of everyone in the

company being united in a concerted effort to seek enterprise development.

Everyone is devoted to their work, and has to realise that the company development is owed to their progress and effort, so the company and employees bring out the best in each other to share their life together. As a result, the enterprise culture not only establishes various kinds of rules and regulations, but also guides staff acceptance of good or rejection of bad, to build on the atmosphere to keep forging ahead in the company to use an impartial attitude towards work and consider the company's benefits first in all respects.

Currently, the company design, action and result are not consistent. Some ideas are considered but staff cannot achieve, although they can perform, they still cannot fulfill effectively, so they are continuously seeking a complete enterprise culture in order to accomplish their planning and to achieve the required standard. The company hopes their staff will constantly work hard without control, when the benefit of the individual causes conflict between company and staff, and employees can stand in a position of making a decision as to whether the company is more important rather than themselves. However, the enterprise culture construction is a comprehensive task, which needs to have a persevering effort and a far-sighted vision.

IT support

The interviewee thought that IT was a double-edged sword. There are lots of

experiences that have been summarised by large companies on how they utilise IT. A few people considered the success or failure of small companies using IT, and much teaching material told of how small firms can imitate large enterprise practice. Nowadays, in order to accept the intense competition challenge, large enterprises absolutely do not let this opportunity slip. However, small firms depend on industrial and specific conditions, which do not need to be put into the same category.

IT seems nutritional to enterprises, if the company feels indigestion, the interviewee suggested that the company should not eat this nutrition, and, because each IT has an individual character, the company needs to form an overall complete set. If it only seeks fashionable IT, and the company does not have the advantage of enterprise culture, and enough funding for necessary support, it might be a stumbling block when the company utilises it.

The company carried out ERP four years ago. As an example, the interviewee told that the idea was stylish, but when it was used in practice, it was not economical, and the company carried out lots of adjustment and deviation in order to meet the needs of the actual situation. Therefore using IT cannot be considered without change, and it is not necessary to catch the IT vogue.

Culture influence

The culture of Confucianism has positive and negative influences; for instance, the

culture of Confucianism emphasise "middle course", the interviewee thought that viewpoint is useful when people's quality achieves a certain standard. However, "our policy, law and price are not perfect, even the social general standards of practice are currently not good enough". People's concept value is in a period of change, so the Confucianism of positive effect also needs to carry out some change when people utilise this culture.

Chinese enterprises belong to the period of fast development, when using "the golden mean" and attending to daily work, they still need to keep a vigorous style of decision-making. The culture of Confucianism is more implicit and tolerant; the company does not have enough time slowly to decoct (taking long time cook) this culture soup when they are at the crossroads. They have to make a firm policy decision and state their clear-cut stand.

The "middle course" is the policy for the company that has long-term pursuits, but they have a degree of control when they use it, which includes a time limit and contains the scope. This "middle course" degree controls the basis of the company's development concept rather than the culture of Confucianism. So the company needs flexibility when using the culture in practice, and through philosophy dialectics to coordinate with the culture of Confucianism.

The enterprise culture mentions that employees are loyal to their enterprise; the interviewee thought that a high degree of loyalty is very important to company

development. However, loyalty has both reason and unreason, and the interviewee emphasised that the company needs reason type loyalty, because the company is not always right. If the employees carry out unreasonable loyalty even to reach a foolish step, the staff become an ignorant mass without thought. They think that the company is always right; they do not use their mind logically to ponder problems.

As for loyalty in the company, the interviewee thought that employees dare to find fault for the company, and are ready to shoulder duty and to sing an opposite tune to the company when they realise something is wrong in practice, and which is not consistent with the viewpoint of the leader. They consider the company's benefits rather than following the managers' interest.

Loyalty is 100 percent implemented as a popular idea in society. If people do not implement what the leader wants, the majority of people will think that person is not obedient and even not loyal. This is a dangerous thing to happen to the company, and also reflects the enterprises culture development directional problem. As a group of leaders, they have a mind as open as a valley in accepting different opinions and suggestions. This is in order to encourage staff to tell the truth from the heart, which is the right way to achieve company loyalty.

Staff improvement

It is part of the enterprise culture build that the company pays attention to improving staff quality. They not only emphasise the management training progress, but also

carry out general learning contests for employees, in order to create an atmosphere of eagerness to learn and strive and to forge ahead in the company. They require a group of leaders to take training in turn, and meanwhile the company provides tuition fees to encourage them to join any type of training which relates to working improvement.

However, if employees study by themselves and attend adult education, such as night school or correspondence school, they can ask for reimbursement of tuition fees, or even a book fee after they finish studying, at the same time, the company also provides time for studies as far as possible, so that the company gives everyone an opportunity to improve themselves, in order to form respectful knowledge and respect the qualified personnel among the company.

Moreover, the company frequently organises inside a series of examinations, covering knowledge competition, technical ability contest, etc. It enhances employees' participation consciousness, enlivens the atmosphere in workshops and concentrates employees' sentiment to have concern for the company's development. The interviewee told that the company treats their staff as family members, providing advanced chances to employees for learning and growing, and hope staff enjoy their working life in the company. The company still carries out lifelong tenure for hired employees. They want their staff to stand together through thick and thin with the company, both of them to making joint efforts in seeking for further development and progress.

Case E: Sample Technology Company Case Analysis

Reasons for choice case and interview arrangement

After talks and discussions with the interviewee, the author was pleased to find that the Sample Company had successfully carried out BPR. They implemented strategy redesign, capital re-engineering, and management process re-engineering to make the company continuously leap into new steps. Therefore, this case fully reflects BPR utilisation in an enterprise development playing a positive effect. From this case, we have a chance to see how BPR may purely be carried out in Chinese SMEs.

On the other hand, with the help from of a friend, the author was lucky to find a person who understood BPR theory and personally led BPR implementation in the company, as a result, the author gained details of BPR utilisation, and had a reasonable discussion with the interviewee. The author requested an interview, resulting in a very friendly invitation.. She was amazed with the achievement of the company with their "Science and Technology Park". This left a deep impression on the author and aroused a strong interest in how the company developed by using re-engineering theory.

Background of Sample Technology Company

Nanjing Sample Technology Co., Ltd. was created in 1997. Approved by the Nanjing Municipal Government, it was reformed to be an equity share company with limited responsibilities at the end of 2000. It is a professional science and technology

company, providing technical products and system solutions for specialised clients.

With continuous investment in and attention to digital monitoring technology, data platform technology, multi-media communication technology and pattern recognition technology, their company has developed core technical products, middleware and application systems for industries like police traffic, customs, procuratorate, safety and protection etc. Several products are listed in the National Torch Plan and considered as National Key New Products.

The company is nominated as a nation-grade key high and new-tech enterprise by the National Science and Technology Ministry and is nominated as a provincial software enterprise by Jiangsu Provincial Information Industry Bureau, with an amount of 45 million *Yuan* capital registered. By now, the company has nearly 200 employees, of whom 65% are experienced high-level technical management and marketing and sales people. The company observes the talent concept of "human supremacy" and considers "responsibility" as the essence of enterprise culture.

The company has a "Sample Science and Technology Park" of over 100,000 square metres. The company considers "to create value for the society and for the customers", as its own responsibility and applies normalised management, trying hard to keep alignment with international practices. An open Sample is expecting cooperation from strategic partners home and abroad. They wish to use their

common wisdom to support Chinese high-science and technology development.

BPR understanding

From the interviewee's viewpoint and working experience, he thought that Sample Company should carry out re-engineering every year. He further explained that any enterprise includes some who are conscious of utilisation re-engineering. Others implement re-engineering without consciousness, the enterprise development track always embodying re-engineering vestige. According to society's development, inside environment and outside condition have to change and the enterprise also has to follow changing outside circumstances. The change covers some steps, such as enterprise's structure, capital, product change, etc.. BPR comes only one step after the enterprise begins change. It is difficult to discuss BPR without relating to the company's change process, this is the meaning of BPR and is a detailed implementation example in a certain period of company development.

Sample Company originally sold laptops, and then they developed technology to become a high-technological enterprise, they finished product restructure and development strategy redesign without being aware of it. The company started significant capital re-engineering, and then implemented process re-engineering, but the latter is only a small part of general re-engineering. The interviewee emphasised that BPR is always part of enterprise change, and never can be the whole story of essential change in the company.

Capital re-engineering

The capital re-engineering is a fashionable and efficient way in which enterprises currently carry out reform. Sample Company relied a few times on capital re-engineering's rapid development to become a nation-grade enterprise. The company first significantly carried out capital re-engineering in 2000, when they imported Nangjing Zhongbei, and Huadong electron two companies by shares. Both of them separately invested 12 million *Yuan*, and each of them held 22.4% stock. Sample Company has power to control the stock, from which the company increased their capital 100 times. On the other hand, they enlarged their invisible assets by several times, which laid the groundwork for the company's further rapid rise.

The company for the second important time utilised capital operation to raise funds in 2004, they entered the Hong Kong stock market to become the first ITS (Intellect Technology System) stock in Jiangsu province to sell in the Hong Kong stock market. The collected money was used to buy extra facilities and equipments for concerted system solution and planned commodity production, meanwhile extended distributions and net sales helped to increase profits. From this capital operation, Sample Company possesses the conditions in capital market, product market, and research development infrastructure to increase investment and integrate dominant resources to build a sphere of influential business.

The company through two times of significant capital re-engineering accumulated

vast amounts of funds, in order to make the company jump to become a capital market hero. It is advanced in strategy adjustment compared with the majority of enterprises still striving in the product market. It shows that leaders of the company have a sharp eye to catch a general development tendency, and very well utilises the government policy, so that the company greatly enjoys support from the state. Meanwhile, the company uses capital operation to extend a large influence establishing authority on the ITS trade, in order to lay a solid foundation, and adjust direction for the company to further development and progress.

Business process re-engineering

This section broadly describes the company and why they carried out BPR; how they managed it; what are their continuations after the main processes of re-engineering; and then to analyse what were the problems existing during BPR implementation, and how they were solved; in the end to provide some concluding remarks of BPR utilisation. From this whole picture display, the readers have a chance to see how Chinese enterprise purely implements BPR.

A: Reasons for carry out BPR

The interviewee thought that the company development strategy is the main reason for guiding them to utilisation of BPR. The company originally focused on distribution, after a few years development, they shifted to research and development technology, and a fixed position on ITS. As a result, they had to readjust the process,

making it relevant to product, management, etc. All needed to be changed, in order to follow Sample Company's quick growing steps, and meanwhile to guarantee the company a more healthly, rapid, and continued improvement.

After the company finished capital re-engineering the first time, they accumulated a solid material base for further development. Then the company shifted their working focus to inside management. Sample Company places the life of their company at the co-ordinate of "millennia foundation". The director realised that standards and responsibility are the root of the foundation, so management improvement becomes very important and a urgent need.

The company not only establishes an efficient working safeguard model, but also builds a standard and responsible prototype of judgement of what is right and what is wrong, founding institution formwork to restrain superfluous inefficiency and unsteadiness, so that the company could efficiently achieve working objectives. To this end, the company has a clear standard of duty, power, and benefit, in order to impel staff in becoming risk undertakers and profit partakers in the company, meanwhile reducing inside waste resources, privileges, etc. The director emphasised that the private enterprises need standard management; that is a strategy for the company climbing new steps.

The general objective of the company carrying out BPR is based upon building a

market chain system in the company. It establishes a sequence of unbalanced structure for the company, continuing creation and development. To be brief, it is continuous endeavour to bring an outside target to transform the company's inside individual objective; to set up the concept that the next step is a customer for the above plan; to use a contract making clear the duty, power, and profit; to carry out rules deciding right or wrong; and to examine results, discussing success or failure. The company not only builds a main working process, but will also present a series related to process re-engineering.

B: Details of BPR implementation

In order to enhance management standards and sequence, the top managers thought that each process of re-engineering should follow some principles. First, was a close link practice and focus on customer as the core to every aspect. Next, the duty, power, and profit supplemented each other, the contents being definite and detailed. Then, qualitative management integrated with quantitative management, and strove for mainly using quantitative management, after that, giving one corresponding authorisation and setting up one supervisory system. Finally, the duty to transfer without condition to uphold customer benefit was a first principle.

The management department followed the above principles in carrying out five big processes of re-engineering. These are bidding process, contract appraisement process, contract implementation process, project practice process, and maintenance

service process. These five big processes focus on the following guide: "customer satisfaction is the core; contract appraisement is the source; project practice is the foundation; maintenance service is the guarantee". The following section gives a detailed description.

Customer satisfaction is the core

Sample Company ensure their operation focuses on creating value for the customer first, then the following order is staff, society, and shareholder. As a habit the company seeks the biggest profit, and, to guarantee shareholder benefit without doubt, the company also follows the above idea of dissemination and implementation in the long run. Now why does the company put creating value for the customer first? How do they ensure the biggest benefit to the customer? What are the connections between this and market chain system?

In essence, enterprise and customer are in close contact, both of them supplementing each other, because of customers' needs change frequently, which impels the enterprise to survive and develop. Nowadays under intensely competitive circumstances, the company has to ensure that customer benefits come first to make them satisfied. In fact, it is a magic weapon for the company protecting them and making their position impregnable.

ISO9000-2000 edition says that to give prominence to customer satisfaction is

important, and stipulates that an enterprise should measure "customer satisfaction level", in order to estimate if the company achieves the target. The measurement of "customer satisfaction level" has two sided content in a broad sense. The consumer is an outside customer for the company, and their staff are an inside customer, so the company leader should consider benefits for both of them. It is a prerequisite to ensure outside customer satisfaction to let staff's individual objectives combined with earnings, in order to fulfil outside and inside customer satisfaction consistently.

Because the company through their staff's outstanding work provided the best service to the outside customer, they meanwhile created the biggest value. In fact, staff are the bridge and connection for the company contact with the outside customer, therefore to guarantee staff benefits is also the main link of the Chinese market. The company throughout makes a clear duty, power, and benefit, and utilises regulation to decide right and wrong, and meanwhile enhances management inspection, in order to improve their product quality, project quality, and service quality. In the end it makes for customer satisfaction, and achieves common success for both of them.

Contract appraisement is the source

The company grasps the main process in order to control source management well, which is the key to guarantee whether the market chain is an unimpeded operation or not. The contract appraisal is the source of the market chain, which is very important

and has a non-replacement effect, because the company signs the right contract, which is important to protect their benefits. The "contract appraisal" is a concrete guarantee for signing the right contract. Sample Company's contract appraisal process is shown in Figure 4.5 and Figure 4.6. Every process stipulates each step's sequence, operator, organiser, and appraiser, in order to make clear duty, power, and profit for each department, later pledging contract implementation efficiently.

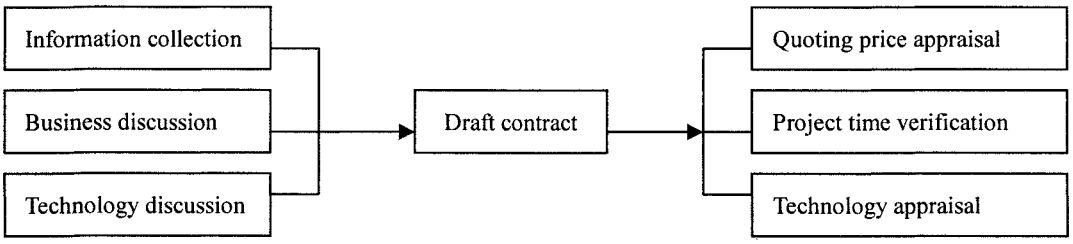


Figure 4.5 The contract appraisal major process

As the seller has to meet the needs of each customer's legitimate and reasonable request, it is no doubt possible to achieve customer satisfaction, but this is not achieved by simply and blindly making concessions to customers. The contract appraisal is discussed and the affirmation process is that the company is objective and conscientious when dealing with the customers' requests. The appraisal content is "quoting prices, project time limit, and feasible technology" three necessary aspects.

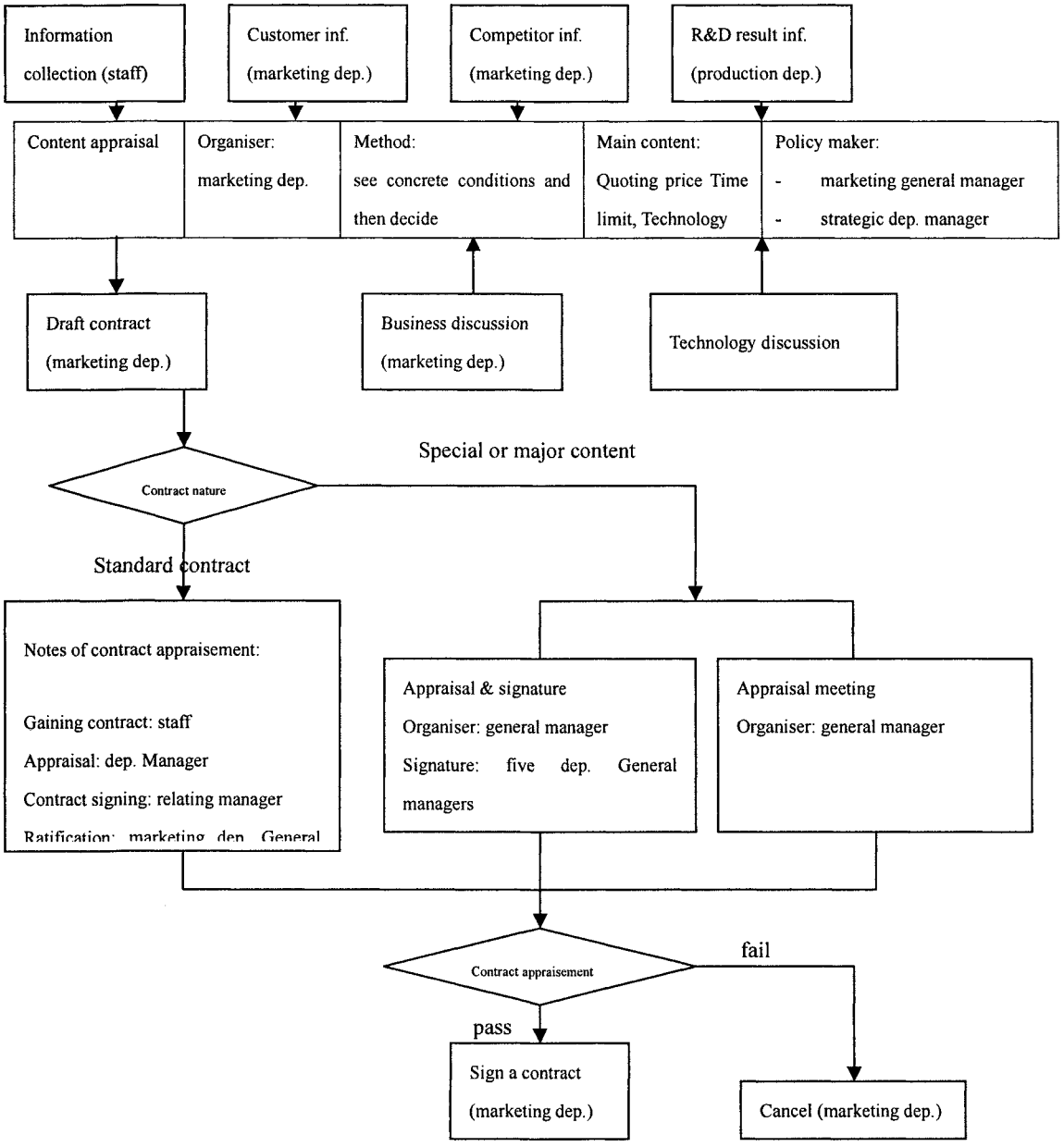


Figure 4.6 The contract appraisal in step by step process

The quoting price is a sensitive problem for both the buyer and seller, as it cannot fail to abide by the company's price system. However, under certain special circumstances it is necessary to make concessions to the quoting price, but it has to be discussed and approved by a higher body, and then carried out. It is practical and realistic to regard customer requirements, and for the sellers to have the courage to

say "no" to certain unnecessary and unreasonable requirements. The sellers represent the company in discussions with customers and must not be blind, for they must fully know about products and technologies, in order to have confidence in persuading customers to accept the company's suggestions.

Each department appraisal and signing of the contract must be a effective contract and be successfully implemented. Therefore, the project department has to carry the responsibility for a time limit; the technology department is duty bound to solve technical system problems. The company is to manage the contract appraisal as a source of ensuring that the contract runs smoothly and to avoid later wrangles with the buyer.

It needs to be pointed out that practical and realistic solving of problems means that each department cannot evade responsibilities; on the contrary, everyone must do his best if it can be done. In contract appraisal process, each department accumulates wisdom. In addition, if the problem cannot currently be solved, it is not implied that it can be ignored, as the company's goal is to ensure customer satisfaction.

Project practice is the foundation

The seller should fulfil the task on schedule, and guarantee project quality that is the main aspect for implementation of the contract. The quality of product and project broadly includes design, technology, procedure, and service quality. Five elements decide quality; these are people, material, method, equipment, and environment.

People are the first element. Staff working quality will directly influence product and project quality standard.

The research and development staff should ensure the elimination of mistakes in the design stage, and keep the products' reliability and stability. The project staff should meanwhile act strictly according to the regulations in the light of specific conditions to fulfil various projects on time. The service staff should consider that the customer is supreme, and pay more attention to quality, in order to provide a satisfactory service for customers.

Sample Company staff should bear in mind that quality cannot be a substitute for advertising; it cannot rely on inspection, and must be displayed by every worker. A lot of enterprises ignore quality and collapse, which is a hard lesson, telling them that quality is the life of enterprise, and quality is the only right way for survival and development.

The project practice process is detailed to stipulate the company's interrelated departments duty in practice process; it is a working process to build on the base of project manager responsibility and makes clear the project budget, material quota, material inspection, and amount put into the stock room; meanwhile, the implementation should follow the construction handbook; the project finish should check standards and issue final accounts; the maintenance department has to distinguish between inside and outside repairs.

According to the requirements of the project practice process, there are many aspects that have to be persevered with in practice. Some projects exist with different problems, where the product is itself a problem but the main issue can be explained as being due to the staff not following correct processes. However, there are various circumstances that could be met in practice, and these cannot overall be reflected in this procedure, therefore, each department formulates their own implementation of detailed rules and regulations in the meanwhile, to build inside the examination system, but the prerequisite is not to go against this general procedure.

Owing to the project department undertaking project implementation, maintenance, and components production in the meanwhile, to deal directly with customers, the project department working quality is the key to influence the market chain. If the quality of project practice is not good enough, the product function is unsteady, and if the customer is not happy with the service then how can they gain payment on time? How can they keep customers returning? For this reason, the project practice process is the foundation of the market chain, and is an important working focus for the next step of company improvement.

Maintenance service is the guarantee

It is a foundation of normal market chain operation to carry out the project practice process strictly. However, it is likely that healthy people can also catch cold or fall ill, so the product and engineering system cannot avoid problems during utilisation; meanwhile, the customer may ask for the training or system to go up a grade.

Therefore, to meet the reasonable demands of customer in a timely manner, and to provide the best service to them is the maintenance service content. Sample Company integrates concrete conditions to formulate the maintenance service process in Figure 4.7, and it is the guarantee for the market chain's normal operation of the company.

This process firstly stipulates the company's clear service duty, project, and content when they sign the contract with the customer. According to this service basis, when the project department receives service requirements from the customer, they have to check whether this service is included in the contract, and then, if they are able to provide this service, they have to solve problems for the customer as quickly as possible. If they cannot work out this issue, they have to discuss with relevant departments first, and then they need patiently to explain to the customer, in order to gain customer understanding.

Meanwhile, the company has to ensure that the relevant staff do a system analysis of customer requirements, to use this as reference material for further research and development of the project. From the Figure 4.7 we can see that this process deals with nearly every department in the company, so, without all the staff taking part in this process, the company cannot achieve the objective of making customer satisfaction.

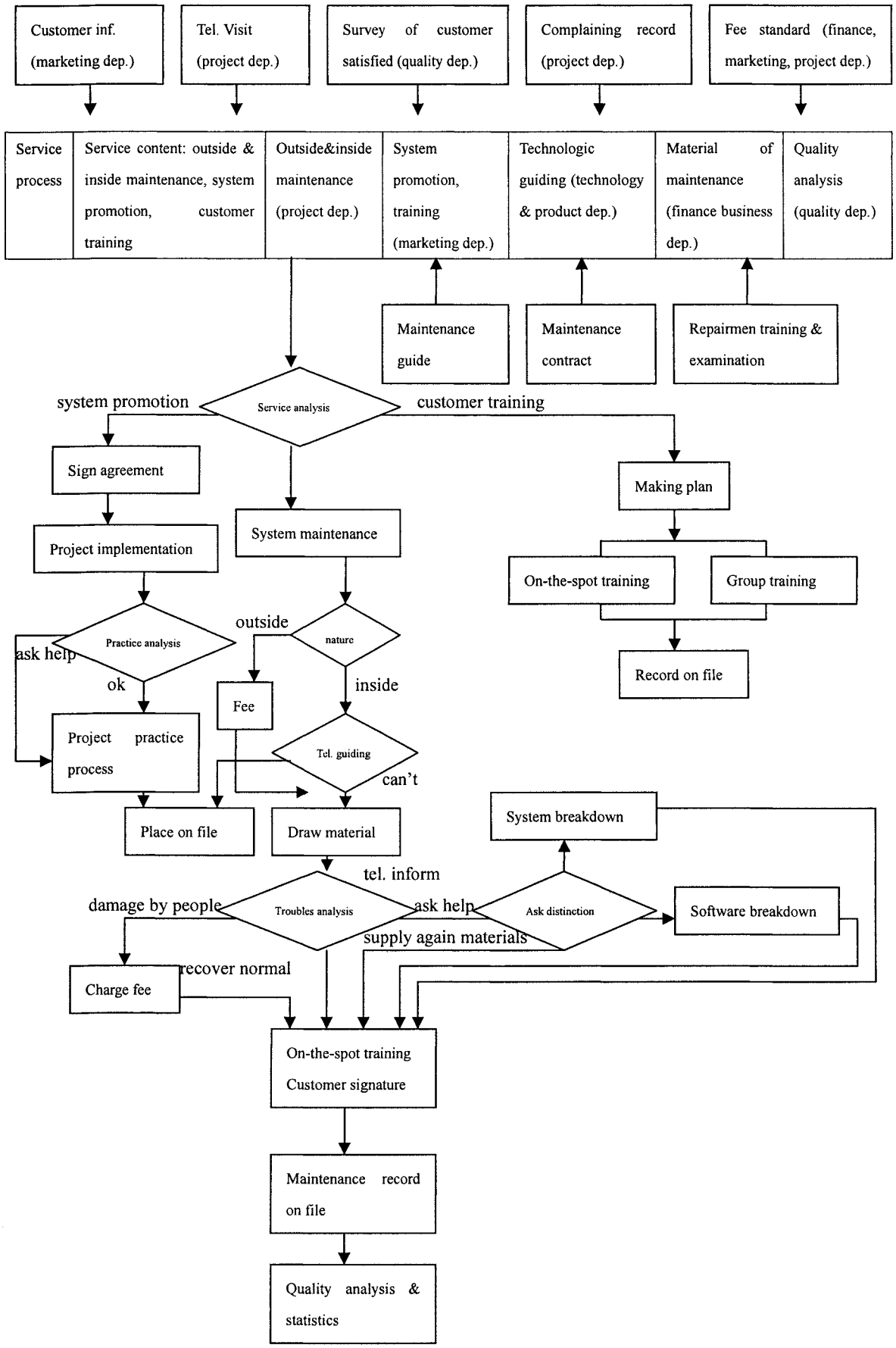


Figure 4.7 The maintenance service process

The maintenance service process makes clear each department's duty and power when they promise to undertake the service, but this process does not use quantitative determination of each department's related profits, and this problem will be worked out in the next stage, where the company establishes "contributions evaluation system", in order to use rules to judge success and failure. However, this maintenance service process provides the guarantee for the market chain's normal operation. The company's target is to set up a sequence system in the meantime, to have their own special features.

C: Continuation

This continuation shows the company after they finished the main processes re-engineering advance step, when they closely followed renewal of their enterprise culture and focused on responsibility culture; soon after they checked up BPR operation results to find the problems and put forward measures to solve these issues; and then the company "went all out" to carry out organisation structure readjustment, in order to achieve the steps for their rapid development. The continuation explains that the company is never content with things as they are, but always keep up continuous improvement and seek for new targets in each stage.

To set up new enterprise culture

In order to achieve a general objective, the company starts to pay attention in order to set up a new enterprise culture. The director clearly puts forward instructions to build Sample Company's feature of responsibility culture. They realise that enterprise

culture is the essential guarantee to make the company obtain long-term peace and to establish themselves in an unassailable position in the face of fierce competition. The creation is the spirit of enterprise culture that maintains the market chain's original power.

The responsibility enterprise culture is based on everyone being responsible for their job, it is a culture institution that is followed by each process, and efficient supervision, and requires the staff to use a masterly attitude towards work. The responsibility culture reflects the company's value and code of conduct, and clearly tells everyone what they should do and what they should not do, fully bringing staff enthusiasm and creativity into play. From this objective, the company decided to integrate market chain group, information group, and implementation standard group into becoming one comprehensive group in the meantime to set up "contributions evaluation system" with consultants as early as possible, in order to spur the responsibility culture to build efficiently.

The company emphasises that they are not only responsible for themselves, but also shoulder their social responsibilities, creating value for the society and customers, which is a strength to prop up the Sample Company cause for ever; to create value for their investors is the operation driving force for their trust. It concretely reflects that everyone carries out duties in their process role and, in order to finish the task, staff have to solve any problems without excuses, meanwhile, everyone is equal in

front of the institution ensuring the company carries out rules and regulations without artificial factor effect.

To check up BPR operation result

The company checked up on BPR operation after one year, and the result was unsatisfactory. The main problems included the fact that objective evidences were not enough, failure control was nonexistent, data record and analysis were not linked, the continued improvement measures were not feasible in practice, the results of examination were not clear, etc. It appeared that the situation illustrated that a considerable number of leaders did not pay attention to it, and their departmental BPR operation was just a paper exercise.

In order to improve the above problems, the company's leader should use "continued improvement" viewpoint to guide their jobs, and to take some corrective or preventive measures to solve these problems. In fact, the solution process itself is a continued improvement process. The continued improvement job covered the following:

(1) Continuously to enhance each department's quality management effectively, in order to reach quality standard and target.
(2) To analyse the present state of process, making improvement plans, and implement advance measures.
(3) To use data analysis and corrective or preventive measures to complete a persistent improvement in daily work.

The "continued improvement" is founded at the heart of the customer. The service department regularly arranges to go and see their customers, in order to find out their needs and comments. Because the information comes from customers it is very important for the company's continued improvement, to analyse this information quickly and precisely, and then to work out an effective correction measure that is the only way for the company to be successful. The company currently formulates an information transmission institution, and combined with "contributions evaluation system" gives appropriate rewards to the staff who provide valuable information to the company.

To carry out organisation structure readjustment

Along with Sample Company extending business cooperation and merging with the other companies, their organisation's basic functions are continuously expanding but it does not have enough capability to control the overall situation. On the other hand, in order to pledge the company's overall profit to reach the highest levels and keep continued development, and meanwhile to go a step further to strengthen the core of industry and to maintain competitive advance of main products, the company carries out organisation structure readjustment after BPR implementation. They want to work through different groups' strategy coordination, business organic composition and resource rational utilisation in order to achieve the company's new development objective.

As a result, they established group strategy development first, the main function being responsible for the company's strategy direction determination, policy formulation, stragegy plan design, strategy implementation supervision and evaluation, meanwhile analysing strategy of subordinate companies' technology and marketing fixed position, in order to provide an integration programme.

Next, the company set up a group investment department to centralise the performance group's capital management, financial management and audit management, in order to bring about the groups' capital sequence management that it could achieve the objective of operations cost getting smaller, and profits getting higher. Then, the company founded a group management department to concentrate performance of the group's human resource, administration function, and law guarantee function, which is in charge of different investors' group management. It needs to have a transparent institution and operation when this is carried out by management.

D: Problems existing and solutions during implementation of BPR

The interviewee is deeply moved to tell that in order to guarantee BPR successful implementation, the leader should strain every nerve to support and understand; in particular, the top leader has to help the management department carrying out BPR, otherwise it cannot proceed and gets nowhere; therefore, leader support is the key of the company's fulfillment of BPR. Normally the interviewee thought that the

enterprises' leader did not encourage BPR implementation, because it is a continuous and slow process, besides being financially costly.

The top leaders of Sample Company did not understand why the company should carry out BPR at the beginning, because the majority of them came directly from school and did not work in the factory. They felt a high degree of urgency to spur on the company's development, so they did not want to attend meetings, as they did not know what to talk about, because they did not understand BPR. However, if the top leaders kept quiet and did not understand, then BPR could not keep going.

On the other hand, staff also contradicted BPR implementation, as they did not like to discard well-known habits, and do something unfamiliar. They were wary of too many details, why they needed to prepare a vast amount of information, manage much data, and set up many files as well as at the same time attending meetings. They felt it was a headache to carry out BPR, because each course of action had a lot of requirements. It was a different way of working compared with previous methods; they might work straight away after the manager had told them: Now "you have to form a basis for action and provide evidence", therefore the leader and staff both resisted BPR implementation.

In order to improve this situation, the group of BPR executors persuaded the top leader to send for a consultant, although the consultant was not of a high standard. It

is a culture in China that a Buddhist monk from outside is hired to chant scriptures easily. In fact, the leader of the executive borrowed the "consultant's mouth" to say what he wanted and to do what he wanted, which was more effective than directly talking to the top leader.

Meanwhile, he wrote a lot of articles during that time in Sample magazine, and then sent these magazines to their customers, cooperative enterprises, even the local government body; the feedback gave a lot of commendations and encouraged them to persevere with it. Those giving feedback included the local government relations leader who was full of praise and put forward popularisation of this experience. This feedback gave Sample Company's leader strong confidence and he realised that it was the right thing to improve management quality and standard, to raise the company's image as well as its competitive capability. The interviewee told that they used various methods to influence and persuade top leaders to support their job.

Moreover, the executives helped staff in solving concrete problems, for example, the product quality cannot always reach the standard, service is frequently complained of, etc. They affirmed to the staff that they had to act at intervals and take responsibility, otherwise they would shift responsibility onto others when a problem occurred. Therefore, the affirmation of duty is very important, and the staff also welcomed this.

"We help them analyse the core of quality problem, to hold a meeting of quality

analysis". They did a host of work to help staff in solving problems, in order to make them accept the idea of implementing BPR. Then they carried out training separately; to train the manager, they started with the management concept; for the employee, they emphasised how to cover detail when doing personnel work that combined with daily work, and how to bring enthusiasm into play on both occasions. BPR implementation is a hard journey, which starts with no interest until it is accepted, and taken slowly leads on to the correct path.

E: Concluding remarks of BPR utilisation

The interviewee thought that BPR utilisation has a starting point but no terminus for the enterprise. If the enterprise wants to develop further, they cannot hold on to original processes. The top leader is conscious that their process is not final, but needs to have continuous optimisation, so that they can really achieve their BPR. For instance, staff come and go, influencing BPR utilisation; when new staff come into the company, their ability and skills are different, as well as being competitive with opponents, market change, etc. This information should be continuously grasped, and then blended with their process, which is vital. If they carry out BPR in and at a certain stage stop, and then start again without persistence, that makes their process always lag behind. So the enterprise should face reality and continuously revise their process, in order to complete this without stopping.

On the other hand, BPR utilisation should reflect their enterprise culture, and each

stage of enterprise culture needs to match BPR implementation. Sample Company advocated "Talent, Belief and Concorde" to emphasise "human supremacy" as enterprise previous culture, because this culture cannot meet the needs of the company development. Now they build "duty culture" to make a clear responsibility for the individual, in order to guarantee BPR implementation continuing to move ahead.

IT support

The interviewee emphasised that BPR has to reflect the present level of IT technical competence. "If you still use old concepts to carry out BPR, it will surely lag behind". Nowadays, every enterprise has a platform of information and computers connected with the Internet, so, if the enterprise does not use advanced IT technology to manage BPR, the process is useless and inefficient and staff cannot accept it. To be brief, enterprises have to blend IT with BPR when they implement BPR, meanwhile using IT to enhance the process effectively.

Culture influence

The interviewee thought that only to use the culture of Confucianism influence to explain enterprise development even BPR utilisation was too abstract. A meaning smile arose on the interviewee's face, and he said that was impossible if enterprises seek for development without government policy support in China. However, what is called policy also can be displayed by using culture. Now the government advocates

"harmonisation culture", where each stage had a different culture and normally changed every five years. For example, currently the government supports "saving culture"; if the enterprise wants to invest in high consumer energy products, meanwhile making environmental pollution, it makes failure certain, so the enterprise development has to maintain a consistency with government policy.

Why did the Sample Company go into the traffic technology trade? Because the government made strenuous efforts to strengthen public secures and custom logistics after the 9.11 terror event, so the company rapidly entered into this trade. To gain support from government policy, they carried out capital re-engineering, entered the stock market, and built a "Sample Science and Technology Park", to make their assets increase numerous times. Sample Company followed government policy and gained 20 million *Yuan* of scientific research funds every year from the state.

Therefore, enterprises cannot only immerse themselves in BPR; they also have to look around at outside circumstances to comprehend management. The majority of enterprises understand BPR only to a point, and implement BPR in their own scope of operation. The question of why so many enterprises fail or succeed is to see whether they synchronised their steps with government policy, if they were ill-adapted to outside conditions then they were definitely at a loss.

Moreover, the interviewee thought that staff were loyal to their company, which is very important for the company's development. They are enthusiastic and throw their

heart and soul into the BPR practice without wanting personal fame or gain, also they may make useful suggestions. It is significant that, on the other hand, the company could be trusted to enhance staff loyalty. Staff are pleased with their jobs in the company, and plan to work long-term in it, as it provides a steady employee team. This is an absolute necessity and main condition for the company's development. If staff are brimming with confidence for the company, they can achieve self value, and feel happy with the company's culture, working environment, human relationships production process, etc. They will work efficiently and with initiative; this is loyalty to the company the other way round.

However, if someone is a real obstacle to reform or BPR implementation, the interviewee thought that the company has to clear them away without leniency, so that the reform or BPR implementation can be smoothly carried out, otherwise it is harmful to let them stay, as they are not loyal to the company but tend more to haggle over every ounce for their own benefit. The company should let staff know that seeking for self benefits should be combined with the enterprise development, it is the only way for future staff after company development, so both of them should be united in a concerted effort to achieve their objective.

Future prospect

The interviewee thought of how SMEs improve their leading ability. It is important that the leader has a feeling for impending crisis no matter what situation or

condition the enterprise is in, so that they can face up to it when the enterprise finds problems. However, how can they engender this feeling of impending crisis? The leaders have frequently to compare the company with similar internal and external professions whether in progress or regress, noting what problems they face. As leaders they are conscious of the gravity of their responsibilities.

The interviewee emphasised that the successful enterprise must have an outstanding leader, on the other hand, the failure of an enterprise does not mean the leader is not good, because the leader cannot decide everything, although he plays a main role in the company development. So the leaders themselves have the requirement to improve their leading abilities, this is most important. Why some leaders can be successful and some fail is down to their personal qualities this is the deciding result.

They realise that they need to continue studying, in order to improve themselves, so that they can keep on training to gain useful information and recruit talented people to set up a leader group, the field of vision and breadth of mind of which are often decided by their quality. Meanwhile, as leaders they have to know what they cannot do; this is also very significant for the company development. Because they will face a lot of opportunities and allurements, they have to have a clear determination as to what they cannot do, which reflects their reasoning and maturity in guiding the company's advance.

Sample Company places the life of their enterprise at the co-ordinate of "millennia foundation". They plan in three years to become ITS leader in the domestic market, and ten years later to become one of ITS leading enterprises in the overseas market. The interviewee told that the company formed a core team this year (2005), and will carry out assets optimisation next year, becoming leader of traffic monitoring and customs logistics in the home market in three years.

The company explained "leader" means: they have high prestige and own a steady first of market share. The main business income compound rate of increase is not less than 40%, and profit compound rate of increase is not less than 30%. They built a more attractive working environment, human relationship, and capital condition compared with their competitive opponents, in order to become a superior talented convergence placed between domestic and foreign trade.

To achieve the objective of becoming leader, they merge inside and outside resources gathered together and give their whole mind to ensure completion. Meanwhile, they have to reform and finish existing projects quickly; to carry out strategy reserve of talent and project; to attach importance to information management and market strategy; as well as to continue enterprise culture construction. They use 20% to struggle to prepare for future development; 30% to endeavour to finish and complete the job; 50% effort to do the present job perfectly. They are deeply convinced that as long as they unite in a concerted effort, they will surely fulfill their objectives.

Case F: Sujiang Technology Company Case Analysis

Reasons for choice of case and interview arrangement

This case is a small enterprise which significantly represents the majority of small companies' features. What is their focus and interest? How do they understand BPR? Does the size of the company influence their reform etc? Owing to the government giving up control of small firms, they have more freedom in settling their affairs.

On the other hand, because their living environment is difficult, their life cycle is short compared with that of a medium or large enterprise, which affects their development strategy and marking, and they are eager for quick success and instant benefit. This is a general phenomenon among small firms. This phenomenon causes BPR no scope for its energies and that is the reason why this research was carried out in a small company as case analysis.

The author planned taking two small firms as case studies at the beginning, and Sujiang Technology Company was the first one that could be arranged by the author's friend, meanwhile, so it was the first interview to be carried out. Owing to lack of research experience, the author was inflexible in changing interview questions based on different circumstances, which landed her in a passive position during the interview and also caused unnecessary loss of information collection.

From practice the author realised that the interview questions needed some change in

order to adapt to different kinds of company and to gain general information. Therefore, the author readjusted the interview questions, and made them become terse and precise; this was the third time that the author changed interview questions. Because the author was careless over data collection, it was scattered, so the case analysis shows a scrappy result.

Background of Sujiang Technology Company

Nanjing Sujiang Technology Co. Ltd. is a high-tech share company, founded in 2002, its registered capital is 500,000 *Yuan*. The company has 20 staff or so, and 80 percent of them have a middle or high-level professional title; the average age is 32. The company specialises in fieldwork: ITS, industry production automation control, biological electron medical equipment etc. system products' research and development, production, distribution, and technological service.

So far the company has successfully developed and put these products on the market, including circuit coil vehicle motoring instrument series, three axis magnetism resistance vehicle motoring series (security checkpoint monitoring and control system), road electronic police series (fixed type, moving type), traffic signal lamp intelligent control machine of city road intersection, radiophone alarm that is a patent product for this company, etc.

Sujiang Company integrates product development direction and market demand to

develop technological cooperation positively with Universities scientific research institution, in order to improve technical creative ability to promote national industry development. The company purpose is "science and technology as a development basis; meanwhile to provide satisfactory service for the society". The company distribution is flexible enough to become a dealership or sell by itself; it seeks sincere cooperation with men of insight together with development.

Brief BPR understanding

The interviewee told that he had heard of BPR theory, and previously had a vague idea, but he did not clearly know about detailed content of BPR. The interviewee further explained that the last time enterprise had paid more attention to quality management and system assurance. From the literal meaning of a word, the interviewee thought that business process re-engineering, process re-engineering, and re-engineering had different meanings. Business process re-engineering emphasises component parts of business process in order to carry out re-engineering, if only re-engineering that can be capital re-engineering or organisation structure re-engineering, etc.

Combining the company's actual situation with BPR definition, the interviewee thought to pay attention to customer requirements and satisfy their desires, which is apt to express the BPR main point. Moreover, using BPR as a method can be accepted by general practitioners rather than strategy or concept. BPR cannot use it

as enterprise's strategy; the interviewee thought that enterprise development based on a fixed model could not carry out frequent radical change. BPR is only part of a reform method, which cannot extend the utilisation limits.

From BPR theory development extent and how it influences an enterprise's development viewpoint, the interviewee thought that BPR utilisation is sure to affect enterprise development. BPR includes several aspects, such as: people, technology, structure, culture etc. How can it rightly use BPR to make enterprise become efficient and rational, and how can it control this degree? These questions are significant and need the managers to pay attention to them.

However, Sujiang Company has not planned currently to utilise BPR, for they think that their scale is still small, and they focus on efficiency, which is more important at present. The efficiency includes coordination ability, problem-solving skill, etc. otherwise when a problem arises, staff do not know who can give help. This is a real problem for the company, and will also have harmful effects on the customer. The company of course never refuses dramatic change when their production increases development, so they will recruit some staff; carry out product classification, do small scope readjustments, etc.

In addition, the author afterwards had a discussion with her friend who is a business partner with Sujiang Company, he introduced the thought that the company do not

realise they utilise BPR, but actually they are doing it, even though they originally did not develop motoring instruments, and do not enter into this trade. After they got in touch with Sample Company (details in case five), they realised that to provide service and product for Sample Company had a broad prospect for company development, so they decided their product fixed position and product type choice, which is a disguised form of re-engineering, only they do not realise it.

Development strategy

From research the company realised that ITS trade has a latent large market, although it has intense competition. The company put in a lot of work on knowledge and technology development, and they carried out product of technical content research to the full extent of their capabilities; they found the product of technical content and the heart of the technology only considered copying something foreign, "we do not have our own thing" the interviewee introduced the idea that the product in the domestic market imports its whole machine or imports some core components to assemble and install the product. Therefore the company objective is to master the core technique of the component, and then extend this core technique to make a system; they believe the core technique of system has a large market. They start from a small product to form a complete set step by step, and cooperate with big companies and make joint efforts to complete the end product.

Management

At present, the interviewee thought the company focused on quality management, knowledge management, and standardisation combination. For example, the core technique involves standardisation and management knowledge, from the angle of the product, the core technique also relates to quality management. They currently have no any system for management itself. They pay more attention to achieving standardisation of product, and link international standard with ISO9000 to guide their production.

Main focus

The company product function decided to tend to focus more on the customer and market. The interviewee thought that the company needed development; they could not only consider satisfying the balance between income and expenditure, but thought there was a gap between internal and external concerns and this gap formed a need. They plan to utilise mature technology from external to internal, and develop their product to an overall standard; to reach the external level, they make their product serialise and form a complete set; they want their product and company to play a certain role in ITS trade.

At present, they think their technology part can satisfy customers' requirements in the short term, but realise they need to make a technical breakthrough when they develop further. However, as the company is just starting on a journey, they do not

think too much, but consider standing firm in the market first. They have a vague consciousness to carry out research and development, product, end process, adjustment, etc. but do not separate the job into more details.

Problem existence and solving

The interviewee introduced the idea that the company still seeks a main channel to gain market share and explore using what kind of method can be employed to enter the market, in order to let more people know of their products and company. They use trade meeting, exhibitions, the Internet, and advertisements to carry out step by step, and advertise in magazine of *China information*; they also start to build their own small website. Up to now, the company thinks that to attend the exhibition has more effect than the other methods, as they can meet more people, directly show their products, and have face to face discussions with their customers.

However, the interviewee thought that the company using the Internet is also a good method; they put their products' key word or trade's key word into a famous search engine, so that when the customers search for "monitoring and control instrument", they can quickly find the company's product. Because of information over control, how can they let people find the company's resource? The interviewee told that they have to spend more money to have their company named on the front page, in order to allow the customer more easily find them.

On the other hand, the company really feels competition pressure from outside, but thinks their research and development section seems all right, because the government does not forcedly carry out technology standard. However, they realise the state will reach that step sooner or later, so they have started to prepare already. The company's leader worked in a big enterprise previously, so has experience to plan further than the others. The interviewee thought that they always keep crises in their consciousness; they do not wait until a problem arises.

IT support

The interviewee thought that IT is very important to SMEs development and reform, no matter if the company engages in research and development or exploits the market, it cannot leave aside IT, because this is an information-led society now, so they have to follow the development trend to renew their knowledge, in order to master new techniques, and think that without doubt IT is one of the driving forces for the company's development, especially in ITS trade.

BPR and TQM interaction

The radical change and continued change is separate in different stages, and the interviewee, without the slightest hesitation, told that when the company devotes overall development they also have to keep continual change, if they focus on certain things, such as product, management, etc. they might need radical change. At present, the company still carries out continual change because the development strategy

decides it; they think the urgent matter, right now, is increasing beneficial results, so that the company has the ability to do something else. However, when technology develops by leaps and bounds, and price competition is intense, the company might carry out radical change in order to reach the development objective.

Culture influence

The culture of Confucianism influences enterprise and the interviewee thought that the state-owned enterprises tend to a "middle course" and that their operations are less of a feature. On the contrary, the private enterprises are required to have distinguishing features, otherwise how can they survive? If everyone seeks a good organisation, where does the feature come from? From this point of view, the Confucianism of "middle course" has a hindering effect on the enterprise development and reform. For instance, Sujiang Company should have their own feature of being something different compared with the others, such as in ideas or methods, so that the company can create new things to provide a service which no other company can replicate.

On the other hand, the "harmonisation" and "middle course" still need to be utilised in a certain way. When the company cooperates with the other companies, when they deal with the customer, and when they carry out management with their staff, etc. they need coordination and communication with their partner, customer, and staff. Meanwhile the society is still immersed in the culture of "middle course", and the

value of conception still attaches a great weight to that culture, so the majority of private enterprises cannot leave aside the main trend of culture influence. The company of course sometimes jumps out of this restriction, especially when they make some major decisions or develop new products, when they might have some radical opinion and extremist operation.

The enterprise culture emphasises that employees are loyal to their enterprise. Normally staff are loyal to their immediate superior; they tend more to follow their superior's baton without knowing the overall enterprise's reform strategy. Meanwhile, if the reform offends the superior's selfish motives, he (she) might make some trouble for it. If this circumstance happens it might influence the reform's planning or order of implementation. The interviewee did agree with this opinion, because he has personal experience, and told that he left a big enterprise last time because he did not have any hope and confidence, for some middle level managers for the sake of their own benefits hindered reform, and the previous enterprise situation was steadily deteriorating.

However, this circumstance happens very little in SMEs, especially in private enterprise. The interviewee analysed that reform always has sacrifices; the original way break-up might affect some of the staffs' positions, if these people have abilities and ample scope to display their talents in the enterprise reform. On the contrary, if these people have no abilities, they surely hinder reform, as private enterprise says

"why do we need this kind of people?" The interviewee thought that the enterprise carried out reform, which always meets some resistance, so the leader of enterprise should have a clear mind to persist, otherwise the enterprise will land the company in a predicament. Therefore, staff who are loyal to their enterprise do not cause this awkward position.

Manager improvement

The interviewee does agree that an enterprise's leader is a more important element in deciding enterprise development, and their capability and quality improvement will greatly influence enterprise progress. So the leader needs continued study, for, as the interviewee said, nowadays it is a knowledge-driven society, and the knowledge cannot stagnate, so as leaders they have to face outside change sensibly, and need to continue study in strategy, financial affairs, and special field knowledge. The company, through visits and cooperation with some successful enterprises, sometimes gained certain inspirations from those advanced methods or thoughts. However, learning is wide and general, and people who are ambitious or tenacious of purpose will find knowledge everywhere.

Table of cases study summary

Case	Name of enterprise	System of organisation	Year of starting	Number of employee	Size of organisation	Products	Brief summary of BPR	Main problems
A	Huadian Television Factory	State-owned enterprise	1988	Before 278 After 100 more or less	Medium-sized	Black and white televisions Colour televisions	In order to extricate them from an awkward predicament, the factory carried out strategy re-engineering in 1999. They invited an independent company to rent the factory; due to existing varied problems the re-engineering direction was wrong causing failure in the end.	Seizing market Employee support Equipment investment Re-engineering direction
B	Daqiao Machine Factory	State-owned change to Joint-stock system	1958	Before 950 After around 700	Medium-sized	Radio; Recorder; Television; Radar; Communication equipment; Transceiver	The factory currently carries out owner system reform; they clearly affirm that they do not implement any type of re-engineering. At present they tend to continue reform rather than radical change, because the factory is an old state-owned enterprise, it has complicated relationships hindering them going fast.	Staff quality standard Complicated relationship Government policy
C	Zhuqiao Printing Co., Ltd.	State-owned change to Private joint-stock company	1988	Before around 80 After 68	Medium-sized	Printing books, publications, newspapers, and magazines	For the sake of development and solving survival problem, the company carried out capital re-engineering in 2002. Because of two companies amalgamation, they felt re-engineering implementation was not based on equality and sincerity, and as a result did not achieve the expected objective.	Apply for loan Status unclear Management lagging
D	YuYue Medical Equipment Co., Ltd.	Private company	1984	926	Medium-sized	Oxygen concentrator, Optics apparatus, Wheelchair, Health-care equipments	Time and again the company did not advocate change or drastic reform. They thought that frequent reform would show the enterprise to be unstable and unsure. They appreciated slow change rather than the sudden use of reform.	Lack of high quality technicians and administrators

E	Sample Technology Co., Ltd.	Share company	1997	Near 200	Medium-sized	Digital monitoring technology, Data platform technology; Mult-media communication technology; Pattern recognition technology; etc.	The company passed, through several times of capital re-engineering in order to rapidly develop and become nationwide enterprise. In order to follow the company's quick growing step, and guarantee the company a healthier, rapid and continued improvement, they carried out BPR in 2002. Soon afterwards to maintain competitive advance and further development, the company again implemented organisational structure readjustment.	The leader and staff did not understand why they should carry out BPR
F	Sujiang Technology Co., Ltd.	Share company	2002	Around 20	Small company	ITS; Industry production automation control; Biological electron medical equipment, etc. system products' R&D, production, distribution and technologic service.	The company currently does not carry out any kind of radical change; firstly they pay more attention to increasing beneficial results. They do agree that radical change and continued change are separated in different stages of company's development.	Seeking for the method to enter the market; Competition pressure

Chapter Five Cross Case Analysis

Introduction

According to Yin's (2003) case study method suggestion, after each case analysis, the next step is to shift cross-case analysis, and see what common topic they have; how they relate to each other; and how they can achieve research objectives. It is based on the holistic-content perspective, the cross case analysis focus on BPR understanding, BPR implementation, existing problems and culture influence. Through BPR understanding analysis we have a brief idea of how Chinese SMEs understand BPR, and know where they are now. BPR implementation is described showing a clear view about reliability and scope of BPR utilisation in Chinese SMEs. There are five main problems existing (p. 213) in influencing BPR implementation, the majority of them evidently hindering BPR utilisation, the rest implicitly affecting enterprises carrying out re-engineering, such as SMEs difficulty in applying for a loan. These three points (p.246) already answer these research questions and achieve part of the research objective.

However, culture influence plays a main role in Chinese SMEs reform including BPR implementation, as it decides how much they can adopt the BPR concept, and this point draws forth a BPR and TQM interaction topic which is significant in practice. IT support is important to be adopted by West and East, and Chinese SMEs tend to be more positive in accepting the IT effect. Leader improvement gives rise to attention in this research, because it is a key factor to guide organisation development

especially in paternalism management society. So the category for cross-case analysis division is based on these seven aspects, the relationship of each case is summarised in the Table 5.1. Meanwhile, the last aspect discusses two issues of whether size of organisation and system of organisation influence BPR implementation, and explains that this research considered choice of case as comprehensively as possible in order to make it more general. The details are described as follows:

5.1. BPR understanding

To consider dealing with different levels of interviewee, the author readjusted the interview questions, not directly asking the interviewees whether they had heard of BPR or how they understood it after first time practice, because the majority of interviewees did not clearly know about BPR and some of them had never heard of it before. The practice shows that people who have professional knowledge clearly knew BPR theory rather than people who had reached a higher position of successful achievement of enterprise.

Category	Case A Huadian	Case B Daqiao	Case C Zhuqiao	Case D YuYue	Case E Sample	Case F Sujiang
BPR understanding	Brief understanding	General understanding	Not mention	Not mention	Deep understanding	Little knowing
BPR implementation	Strategy re-engineering	Not consideration	Capital re-engineering	Not consideration	Capital re-engineering BPR	Not consideration
Problem existence						
(1) Staff support	Staff upset	Passive adoption reform	Staff upset	Active adoption reform	Understanding problem	No problem
(2) Staff quality standard	Follow the crowd	Bad habits & deeply rooted	Management lagging Low level	Lack of high quality staff	In high level	Middle level
(3) Complicated relationship	Middle level	High level	Middle level	Low level	Low level	Low level
(4) Government policy	Betrayal	Might help	Betrayal	Not mention	Support	All right
(5) Apply for loan	Not mention	Not mention	Impossible	Not mention	No problem	Hard
Leader improvement	Training	Individual improvement	Not consideration	Training	Training	Individual improvement
IT support	Positively agree	Positively agree	Positively agree	Causing problems	Positively agree	Positively agree
TQM &BPR interaction	Re-engineering concept	Gradual improvement	Re-engineering concept	Stable improvement	BPR	Improvement
Culture Influence						
(1) Harmony	Positive effect	Positive effect	Positive effect	Positive effect	Government policy	Positive effect
(2) Middle course	Support reform	Hinder reform	Both effects	Both effects	can be displayed by	Both effects
(3) Loyalty	Staff upset	Leader loyalty	Staff upset	Foolish loyalty	using culture	Staff loyalty

Table 5.1 The categories within case relativity

The interviewee from case B clearly knows BPR theory, and he does agree with Hammer and Champy (1993) about BPR definition. He upheld that BPR theory is an innovation thought rather than an improvement thought. He thought that BPR should be based on an enterprise's overall basic consistent capability; otherwise BPR utilisation cannot help an enterprise achieving the desired results, and can even make for a negative effect. On the other hand, he thought that Chinese SMEs process is still simple and the urgent matter right now is for Chinese SMEs is to improve overall basic capability rather than chase management's fashion of BPR implementation.

The other interviewee from case E thought that an enterprise's development track always embodies re-engineering vestige; some of them might have consciously used re-engineering, the others might implement re-engineering unconsciously. He further explained that BPR utilisation should keep a continuous process without end; it is an underway process within an enterprise change. However, it never can be the whole story for essential change in an enterprise. He especially emphasised that BPR utilisation should reflect an enterprise's culture, and each stage of the enterprise's culture needs also to match BPR implementation.

They generally understood that BPR could be restructured, readjusted or reformed, depending how big a step it is for the enterprise's desire to change. It could only be part of what is necessary for a radical change; it could have certain irrational parts of

change; it also could be an overall situation change. Meanwhile, some of them agreed that BPR could be implemented in any parts of concept, strategy, structure, technology, product, market, human resource management, service etc. and could be utilised externally. They did not mind the BPR core concept of process; they tend widely to adopt BPR in practice, which is far removed from BPR definition.

The remainders of the interviewees evidently showed that they did not know about BPR, they might hear this word, but they were unclear regarding the detailed content of BPR. In order to save 'face' they did not directly answer the question during the interview but tried to talk of something else also related to this topic, and the author realised that they actually did not know what BPR was, so the author adjusted interview questions in a timely way to make it easy to understand, meanwhile focusing upon the topic in order to gain general information.

To summarise that Chinese SMEs understanding of BPR still remains in a superficial view, the majority of administrators especially in private companies, may be facing survival because of development of intense competition, they generally pay more attention to daily work than book knowledge improvement and some of them unconsciously use BPR theory without knowing. This phenomenon reflects that they might not gain any training of management theories improvement, though actually they attended some meetings or exhibitions, but they were interested in sharing business information rather than management experiences, so how to change this

situation will be discussed in the section of leader improvement.

5.2. Brief summary of BPR implementation

From data collection, the author realised that the majority of enterprises did not really carry out BPR, but use BPR concepts to implement reform. Some of them only use the word re-engineering without being aware of the essential content. For existing varied reasons the rest of them do not want to use it, as some of them still pay attention to their survival and strive to gain market share as their first objective; some face many problems, so in order to keep a stable situation they tend to solve problems first and then continue improvement. Some have their own development opinions and track; this is difficult to change especially when they are currently successful. Nevertheless they do not refuse to use BPR in the future, as most of them accept the BPR concept, and they agree that BPR theory can be used and has a wide field.

On the other hand, some enterprises use re-engineering concept to carry out reform failure, they might only have a superficial view of re-engineering, and they cherish different objectives in implementing re-engineering, which is not the right way for the enterprise's development; or they focus only on their own surroundings without looking for outside circumstances change. There are many particular reasons to cause them failure, which is the lesson learned by the other enterprises. However, this phenomenon happens in Chinese SMEs which is not surprising, because their

management is not professional, and most managers are eager for quick success and instant benefit rather than taking time in overall improvement. Meanwhile, how deeply they understand BPR decides how far they can go, and because their general understanding is vague it influences to cause the result.

However, a small number of enterprises clearly know BPR concept and utilise it in practice, these kinds of enterprises are often successful and seek further development to keep their competitive advance. They are conscious of the gravity of using BPR, and have planning and dividing steps to implement it. Meanwhile, they keep a continual process of BPR utilisation for necessary system build and enterprise culture establishment; this also shows that they have professional administration to manage the enterprises; with the enterprise development they can adjust in a timely way the policy of BPR utilisation to shift in particular sections of re-engineering. They are a few mature enterprises that understand and utilise BPR theory.

According to Macdonald (1995) BPR is used to cover three obviously different management approaches to change. These are process improvement, process redesign and process re-engineering. Each of them uses an effective approach to meet different circumstances.

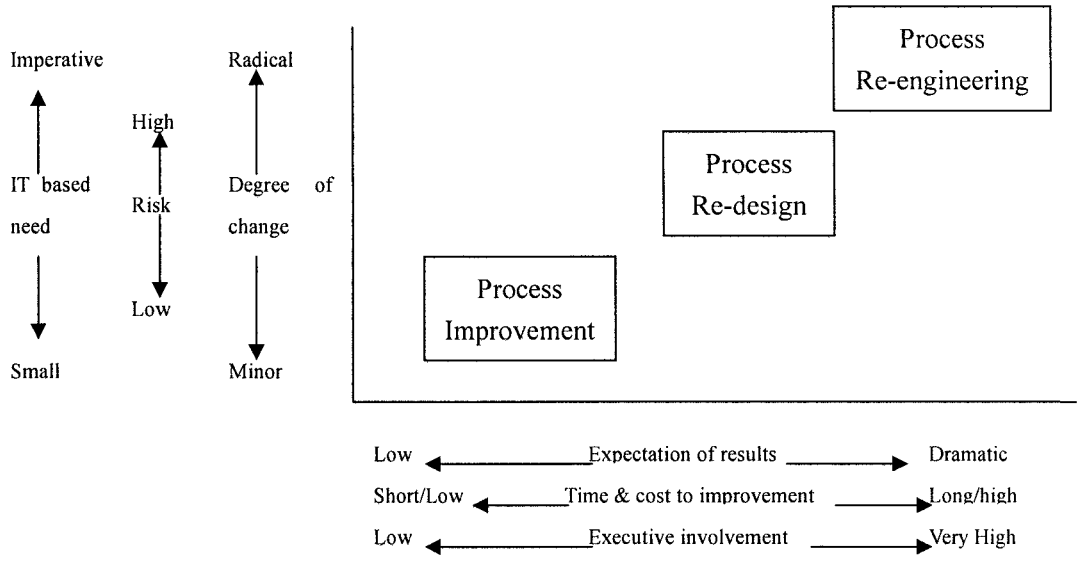


Figure 5.1 Difference between improvement, redesign and re-engineering (Macdonald, J. 1995, p7)

Process improvement has a tendency for improvements to be small, enclosed within functional boundaries and focused on improving the existing system. Process redesign represents radical change for most companies, concentrating on major processes with cross-functional boundaries, and it is generally strongly customer focused. Business process re-engineering brings dramatic improvements, and companies need major breakthroughs in performance in order to leapfrog over their competitors, it is displayed in Figure 5.1.

The majority of Chinese SMEs are in a process improvement stage, although they do not realise that they are on the BPR track, which shows they might not know of the BPR concept or they might have only a rudimentary knowledge of BPR. On the other hand, some of them evidently carry out radical change, but might be muddle-headed

over BPR theory, and, because they have different objectives for carrying out re-engineering this causes a high resistance, so in the end the result is failure. However, there are still a few enterprises reaching process re-engineering level, with dramatic improvements that show that they have a clear re-engineering objective and knowledge guide. Generally speaking, the majority of Chinese SMEs still stop in the basic process improvement stage; some of them have clear consciousness to go further, which presages that BPR theory has wide utilisation prospects.

5.3. Existing problems

There are many problems in various forms existing in Chinese SMEs, this research summarises five prominent problems that play a main role in organisational reform and BPR implementation. These problems all relate to artificial factor making, the majority of them tending to be subjective rather than objective, which really hinders enterprises' reform or re-engineering. Therefore, how can they solve these problems or improve upon them? What kind of suggestions or recommendations can be provided by the author? These will be described in the next chapter. The details of the problems are described below.

Staff support

No matter whether enterprises fail or succeed in carrying out BPR, they all face the same problem that staff do not support BPR implementation. Some top managers want to use re-engineering only to get rid of their staff; they do not really care about

them and this even spreads to certain middle-level managers. The organisations think their staff are a burden or they have some different objectives driving them. On the other hand, their staff also realise the situation that they face and start instinctively to protect their benefits; they try to hinder BPR implementation, and when they comprehend that they cannot stop this reform trend, they choose to run away from this whirlpool.

However, in some enterprises staff follow the habits that come second nature to deal with daily work. Because of their inertia they do not like to change their manner of working, so when the enterprises carry out BPR, they do not understand why they should undergo so many changes, as changes cause inconvenience. On the other hand, some top leaders also do not understand why they should carry out BPR, as they tend to tap new financial resources and explore development channels rather than readjust their process that is a slow and expensive matter and essentially they do not clearly know BPR concept and effect. This phenomenon shows that leaders need significant improvement. This topic will be discussed in the next section.

Staff quality standard

Many enterprises exist with lower staff quality standards especially in state-owned enterprises; they have some bad habits that are deeply rooted, such as: lack of the desire for progress, unfair competition environment, and job scarcity, etc. Most problems are objectively formed by long-time accumulation in society and this

phenomenon causes employees to be less enthusiastic over their work and does not improve initiative. On the other hand, because of high pressure for survival and an imperfect society insurance system, more staff are under control by other people and cannot take their destiny into their own hands. The majority of them follow the crowd rather than do all they can do to catch up, this circumstance makes employees' quality standards generally lower.

However, private enterprises also exist with this problem, some of them are restricted the location that cause their staffs' background knowledge not to be good enough to reach the standard, especially in the manufacturing industry, where employees might be just peasants entering the factory to work without detailed training. Though some successful enterprises carry out system training programmes to improve their staff, in order to enhance overall quality standard of enterprises, but they still lack a high quality of technicians and administrators' key talents. Some enterprise management is lagging behind, which also reflects managers' lower quality standards. Therefore, staff quality standards decide whether they support enterprises carrying out BPR or reform and their understanding determines how much BPR or reform they can implement. This circumstance clearly reflects one of BPR principles, that people are crucial to the success of BPR.

Complicated relationship

The complicated relationships exist everywhere in society. They are part of the

Chinese culture, and everyone should build their own relationships, otherwise they cannot walk a single step in their society. Owing to lack of resources in the organisation, people should think of various methods and use varied relationships to share these resources, such as promotion, bonus, study opportunity, etc. The relationship is used as routine in daily life, it grows with twisted roots and gnarled branches, which make a slight move in one part affect the situation as a whole. These relationships can be master and apprentice, schoolmates, fellow townsmen, etc. They help each other without the slightest hesitation when they face trouble, but they do not make a clear distinction between right and wrong most of the time, so a complicated relationship obviously hinders enterprises in carrying out BPR or reform.

This research cases analysis shows the complicated relationships generally existing in state-owned enterprises; these enterprises are older so the phenomenon is more serious, which reflects why old types of enterprises find it very difficult to carry out BPR or reform. The private enterprises show the phenomenon much better than state-owned enterprises, because they face high competition on the outside, so they need their staff to work hard to gain as big profits as they can. They still have some close relationships among the organisations, but this does not pose a threat for the enterprise's reform or re-engineering. On the other hand, some private enterprises still continue to use family business management, and, although some of them have a certain scale of success, they tend to change gradually to become a share stock

enterprise.

Government policy

Government policy is generally acknowledged in that it really influences Chinese SMEs survival and development. If the government policy treats SMEs with leniency, they will grow fast and full of life and vigour, otherwise they are in hard situation. Unfortunately, government policy frequently changes towards SMEs in China, especially that affecting private enterprises, which need to take great care when they are doing business. Sometimes government policy encourages SMEs boldly and resolutely to go ahead, but sometimes the government feel that SMEs development influences their benefits, so "stop" short to SMEs. Therefore, SMEs should learn to win advantage from both sides, in order to avoid an awkward predicament. However, this kind of government policy lacks continuity and steadiness, and really hinders SMEs development.

On the other hand, successful enterprises show that they follow in government policy footsteps to gain a supporting policy. Conversely some enterprises face many problems because of government policy, such as: employee status being unclear, application for a loan, etc. However some policies might cause temporary problems but in the end will help enterprises, whereas some really hurt enterprises, because Chinese SMEs development is not balanced and circumstances are complicated. So government policy cannot find a single solution for diverse problems, and this

research uses this fact to remind the policy-maker again that policy making needs stability and persistence to make a positive effect in supporting SMEs. The other main problem is policy implementations without law guarantee, so the executive body can unrestrictedly explain the policy that causes a confused situation to happen, and which the administration can hardly control in the end. This phenomenon should give rise to attaching great importance to the policy-maker.

Applying for a loan

The majority of private enterprises feel they are in difficulties when applying for a loan. During the interview, the interviewee said that from personal experience he knew how hard it was to secure a loan. Although the government policy is to support SMEs applying for a loan, actually SMEs gain less support from that policy. They should rack their brains to find varied methods to gain the loan. To trace this phenomenon to its origin they generally reflect that the bank does not trust them, and to get further to the roots of why they do not gain trust, the answer is that when SMEs apply for loan without law guarantee this makes banks face a high risk.

This does not mean that the government does not make laws allowing application for loans. This is because people do not treat the law seriously, on the other hand, the government department enforces the law but without control. For example, in order to avoid paying more tax, they do not provide figures showing the true profit when they apply for a loan; they fear they will be highly charged. The other evidence is

that neither of them provided annual sales figures to the interviewer. When she asked they spoke evasively during the interview, so in the end the interviewer realised that they resented being asked this sensitive question. Therefore this circumstance causes SMEs difficulty when they apply for a loan.

On the contrary, some SMEs do not feel difficulty in applying for a loan, either because they have really successful enterprises in that area, or the government is interested in their trade, such as high-tech trade, and most of them have some official background or they have a good relationship with a bank official, otherwise there is nothing they can do. In brief, it is an artificial factor that causes SMEs difficulties in applying for a loan, and the government policy for implementation falls short of requirements, so to build a perfect system needs control and reduction of this artificial factor influence.

SMEs difficultly in applying for a loan, which influences their implementing re-engineering change. Some interviewees told that, without enough loans, the organisation could not have a normal operation, let along carry out reform or dramatic change. It is a matter of the utmost urgency, which directly influences their survival. The majority of SMEs lack resources, so if they cannot apply for a sufficiently large loan, it makes their situation add frost to snow and it is difficult for them to shake off the yoke. On the contrary, if they can easily gain a loan it makes them more than equal to the task of seeking reform and further development.

Therefore, the financial resource is a foundation of SMEs which consider implementing re-engineering. In practice case E provided an evidential example to illustrate that the company had sufficient funds as a basic resource to support them in implementing BPR. In the opposite case C could not go into action without a loan, although they had many plans and good ideas to carry out reform and even re-engineering.

5.4. Leader improvement

The experience of successful BPR is highly dependent on strong leadership within the organization (Loh 1997, Armistead and Rowland 1996). Peltu, *et al* (1996) reported that managers play a critical role in BPR, they can be key drivers and facilitators of change, but also can act as influential potential blockers of innovation. Therefore, some interviewees directly told the author that "SMEs development show owners' improvement journey, SMEs' problems show owners' problems." The above analysis of SMEs main problems shows that leaders' quality standards decide how far the enterprises can go, because leaders' standards determine their management quality and further guide staff quality standards as well.

Leaders enlightenedly adopt new ideas and the enterprises easily carry out reform for BPR to accept challenges in a fierce competition market, otherwise they might become a main stumbling block in organisational reform or re-engineering. For instance, cases (A+C) reflect that because the superiors have selfish ideas and

ulterior motives, this causes re-engineering implementation failure in the end. On the contrary, if leaders understand BPR theory and give full support, the BPR implementation will come to operate successfully. Without doubt leaders' quality standards directly influence their enterprise development.

Therefore, it is extremely urgent to improve leaders' quality standard. Nowadays rapidly changing global business trends have created needs for continuous learning and training. From cases analysis summarised, SMEs leaders realise that they need continual learning, in order to keep a sharp lookout for market change and an open mind to accept new opinions. Some of them have formal training every year. Many of them use various visits, lectures and meetings to share information and learning experiences from their professional competitors and customers. In brief, the successful enterprises give more attention to carrying out a training and learning programme, and they are personally conscious of the gravity of their responsibilities in renewing their knowledge and concept, in order to meet the needs of fierce competition.

However, some enterprises still do not provide formal training, but tend to learn development by personal business. They consider how they can gain more profit for the enterprise rather than training improvement, because the enterprise's survival and development is more important than other things. So long as they carry out reform or re-engineering, they still focus on results more than improved staff quality standards.

Although Morris and Brandon (1994) stated that training and retraining is an important segment when enterprises implement BPR, actually fewer enterprises really think about that in practice. So how can they regularly provide learning course or learning opportunity for them? This research gives some suggestions detailed in the next chapter's related topic.

5.5. IT support

Along with rapidly economic development Chinese SMEs cannot wait to utilise IT, for the sake of life's convenience. IT provides an easy way to communicate with friends and popularise information. Nowadays e-commerces are growing fast and so take a dramatic change of business concept and influence people's daily lives. Moreover, some enterprises use IT to merge product design, produce, and packing into an organic whole. IT also gives full play to enterprise management, as it can be used to set up files and transmit messages. Some enterprises simply utilise computer software management to deal with daily work. Meanwhile IT offers a great service to exploit markets; it helps collection of information, customers' feedback, marketing research, etc. IT seems to seize every opportunity to enter daily life.

However, some enterprises have different opinions; they think IT is not a necessary condition for the enterprise's development. They do agree that IT provides a lot of convenience to the enterprises development, but also causes many problems at the same time. Some enterprises suffer setbacks after they carry out ERP; in practice

they find that there is a big gap between their desires and results. Some process manufacturing enterprises do not need IT so much; they do not think that without IT they cannot survive, but pay more attention to developing new markets and improving service quality rather than IT investment. Some enterprises carrying out reform or re-engineering do not use IT as a necessary tool during that time.

However, the majority of scholars and practitioners tend to agree that IT is a major tool in supporting and enabling BPR implementation, although some of them sing an opposite tune. Along with IT involving increasingly closely with daily living, most enterprises utilise IT so frequently that they cannot walk a single step without it. Chinese SMEs generally lag behind IT utilisation and investment, some of them have a sense of urgency to develop their IT facilities, and enlarge the degree and scope of IT utilisation, in order to catch a rapid development trend. In short, IT plays an even more important part in Chinese SMEs further development; this circumstance is not in contradiction with theoretical discussion.

5.6. TQM and BPR interaction

The case analysis shows that most of the enterprises tend to change continually rather than dramatically. Owing to the deeply rooted culture of Confucianism influence, the majority of Chinese SMEs leaders and administrators utilise "middle course" as a maxim when they deal with daily work, make decisions, solve problems etc; especially their thinking and concept was affected by traditional culture, so it is not

surprising that some enterprises have a traditional idea of management concept, development opinion, and reform perception, such as case D (although they are successful).

On the other hand, realistic productive forces also influence leaders and managers in carrying out continual change when they implement reform. Chinese SMEs' productive forces still fall behind compared with general state-owned enterprises, as they are affected by policy, resource, location, etc. These elements cause SMEs development to be unbalanced, so their capability decides that they tend to change gradually rather than radically. However, it should not be ignored that the Chinese modern history of unrest development deeply influences people's concepts; they fear social upheaval that seriously threatens their survival and development, therefore they need a steady and harmonious society environment in which to live and develop, so they practice what they preach; as a result, radical change causes unorthodox opinions, which is not accepted by general managers of Chinese SMEs.

However, along with economic development and joining the international market, Chinese concept is gradually changing to learn advanced management theory, followed by rapid development trend, and to implement radical reform. In order to keep competitive advancement, some enterprises take a lead in acceptance and practice of radical change in BPR theory; although they met some problems during BPR implementation, because they have a high standard management team, they

achieved the objective in the end. Some enterprises use BPR concept to carry out reform in order to extricate them from an awkward predicament. Owing to some superiors having selfish ideas and ulterior motives, the reform did not achieve the desired results. However, they make the first step after all and, though not successful, they contribute their lesson to their successors and the other enterprises.

In fact the majority of enterprises tend to use TQM and BPR in different development stages. When the enterprises plan to carry out big changes that can involve market shifting, structure redesign, process re-engineering etc. they use BPR concept to implement reform as part of reform or overall reform of enterprises. Every firm has its own stage of development by leaps and bounds; during that time BPR theory is used like fish let into the water (BPR can be easily adopted and utilised). Some of them might not realise that they use BPR theory, but this does not influence how they work. After enterprises rapidly change they need rehabilitation, adjustment and complementing by such things as development strategy, organisation structure, human resource etc and at this time TQM plays main role in enterprise development.

Normally enterprises stay in a TQM stage longer than BPR utilisation; this is a process from quantitative change to qualitative change and usually the quantitative change takes time to gather power without being aware of it. It is less of a conflict to the enterprises and is easily accepted by them. As a result, many enterprises still take delight in talking about how they carry out gradual change, and they also agree that

they introduced some big changes after a few years, so TQM and BPR are used alternately by the majority of enterprises, depending on their development steps.

5.7. Culture influence

The interviewees generally felt that the Chinese culture of Confucianism is too wide a topic to be discussed during the interview. This circumstance meant that the interviewer was caught unaware, owing to this research focus on problem analysis and solving rather than culture influence, therefore the interviewer put it tactfully and asked briefly whether the social culture of harmony and "middle course" promote enterprises' development; meanwhile, what kind of effect does enterprises' culture of loyalty have when they carry out reform?

None of them disagreed that social culture of **harmony** is a necessary element of society and enterprises development, the working internment; relationship of colleague; supplier and customer, which all need harmony in daily work. It plays an important role in safeguarding and steadying society as well as giving a stable organisation and an even family unity, in particular, when enterprises finish reform they need harmonisation and communication rather than criticism. When case E implemented BPR they had meetings with managers and staff in order to harmonise each department's job, and at the same time find inadequacies and problems in order to improve later.

In an opposite example, case A from employees murmurs filled the streets after managers carried out strategy re-engineering. Their superiors did not listen and harmonise with factory's administrators, and they also did not communicate well with employees, so they lacked support from both of them, causing re-engineering failure in the end. Case C is another example showing how harmonization is important during re-engineering. Again their superior did not manage this well and harmonise with the two factories when they appointed a leader and a merger meant that trouble lay hidden until the factory went into operation. This phenomenon tells that the social culture of harmony plays a positive effect during the period of enterprises carrying out BPR or re-engineering.

On the other hand, harmony highlights avoidance of direct confrontation and radical changes in order to remain organisationally stable and protect 'face' from superiors to subordinates, this view is in contradiction with BPR essential concept and Hammer's (1990) advice, but it still has a wide market. For instance, when case B carried out reform, they took changes separately in order to avoid contradiction, with the intention of continually influencing reform; because they are an old state-owned enterprise, their old customs are difficult to get rid of and meanwhile they have a thousand things waiting to be done, so they put off administrative department and logistics department reform in order to reduce resistance.

If the factory implements radical change that will cause direct confrontation with

different levels of people's concepts and behaviour, etc. and the factory does not have enough time to solve these problems, they have to catch the market change to consider how they can survive first, so they used "middle course" to implement reform. On the surface the harmony has a positive effect, but it is a restriction and hindrance to the reform. When the factory deals with the manager of the inspection section, because her husband is a leader in the army, the factory avoids offending relationships and gives the 'face' to the superiors in order to keep the overall situation in development; they do not move her from her position when carrying out reform. There were the same misgivings when in case C management kept patience with a member of their staff who gained no business in nearly one and a half years before dismissing him.

This phenomenon is in general existence in state-owned enterprises. On the surface the harmony has a negative effect on the enterprises' development, but it is effective in protecting enterprises and relaxing the tension in reform. It is impossible to cut the Gordian knot (a complicated and intricate problem) in a practical operation, with the potential problems and complicated relationship behind it that mere words cannot fully express, so harmony plays the kind of effect that depends on in what kind of situation it is used. It is sure that harmony has a positive effect after enterprises have reformed or re-engineered.

The culture of "**middle course**" is the twin of harmony, and all the essential meaning

included in harmony. People tend to use "middle course" as the method and "harmony" as the guiding principle in practice. As a result, people generally agree with the "harmony" idea, but they have divergence from the "middle course" utilisation. The majority of them thought that when enterprises carry out reform, they cannot think more about "middle course" otherwise the reform cannot go on. The "middle course" makes people do things with undue caution and look both ahead and behind, which really influences the course of reform.

In particular, case B has personal understanding of how during reform how "middle course" hinders staff's thinking and behaviours, for example, staff working in the new product development department worry about making mistakes or feeling hurt themselves, so they tend to use the existing technology rather than creating and exploiting a new one. On the other hand, society attaches great weight to "middle course" to deal with daily work, it is a mature standard generally recognised, which is the reason why people fear to go further without guidance.

However, many enterprises still agree that "middle course" has a positive aspect in practice; people should control the degree to which they use it, especially when enterprises carry out radical change, when they should deal with matters summarily without regard to details; there is less scope for "middle course" abilities at that time. Some compromise method should be used during reform that is a "middle course" concrete manifestation; it will provide much help to the reform if it is rightly used.

Practical experience advocates combining hard tactics with soft measures when the enterprises implement reform.

The cultures of Confucianism believe that 'filial piety and love' (*Xiao*) and 'loyalty and consideration' (*Zhong*) aspects are the mainstays of harmonious co-existence among people. *Xiao* requires the young to listen to the elder people's suggestions and opinions, and they cannot contradict seniors in front of people, otherwise they not only lose support but also fall into trouble. The social structure 'hierarchy' also adds fuel to the fire by providing a wide stage for seniors. Society does not encourage the young to make changes on their own initiative and that is reason why the old types of enterprises have difficulties in carrying out reform.

Zhong is the principle for dealing with friends; it emphasise loyalty to their family and undertaking; it is the standard for people to have a duty to the society; therefore loyalty is a virtue generally accepted by society. The enterprises culture of **loyalty** is based on this culture background, which requires staff loyalty and consideration to their enterprise, and meanwhile the organisation provides welfare benefits and improvement opportunities to attract staff to the enterprise.

The interviewees agreed that staff are loyal to the enterprise and are a very important resource to the organisation. If staff unite in a concerted effort with the enterprise through thick and thin, no matter how difficult the situation the enterprise faces, they will soon move away from a deep valley. Alternatively if employees are full of

dissension and discord with the enterprise it makes them lose their heart for work. Because case C managers had disagreements with new leader, who came from the other company after they carried out re-engineering, the company did not improve their business for a very long time. Case A also existed with a similar problem that finally caused valuable staff to leave.

Therefore the reverse side of loyalty should emphasise that enterprises need to be loyal to their staff, case C and case A cases show that their superiors did not care about staff benefits when they carried out re-engineering, so staff did not unite in a concerted effort with the enterprise to tide over difficulties, but chose to go by different roads. Case B realised this problem when they carried out reform, and focused on 'new product development' department reform first, gradually giving impetus to the other departments, in order to reduce resistance to a minimum. Case E uses a perfect management system to treat staff reasonably well, meanwhile providing development opportunities in order to encourage the staff to remain with the company.

Moreover, case D mentioned "foolish loyalty" that is in general existence in Chinese enterprises. Chinese tend to listen more than talk when they work with a superior, and hardly disagree with authority even if they think the authority is wrong. On the other hand, the majority of employees think their words carry little weight, nobody wants to listen, and traditional ideas influence people into thinking it best to speak and act cautiously and avoid making trouble. Therefore they usually accept opinions

and carry out orders without thought or argument, which creates a false impression that everything is fine; meanwhile it is difficult to hear an opposite tune. This phenomenon really hinders enterprise progression and improvement, and this should cause attention to be paid by the administrators.

Through the above analysis, we clearly see that Chinese culture has a considerable effect on enterprises implementing reform or re-engineering. From a guiding principle of harmony aspect, it makes a positive effect on coordination and acts as a buffer when enterprises finish reform or re-engineering. "Middle course" as a method attracts two opinions, one has a positive effect to reduce resistance in reform progression; and the other has a negative effect to result in looking both ahead and behind in reform implementation. Meanwhile the majority of enterprises agree that loyalty has a promotional effect and this should give rise to attention by the administration. The conclusion is that Chinese culture has some conflicts with enterprise reform and the BPR concept, so how can a practitioner using a flexible culture change a negative effect to a positive effect that depends their experience and wisdom?

5.8. Issues

This research clearly shows that the **size of enterprise** surely influences BPR implementation and that is the reason why this research used a small company as case study. At the beginning, the author planned to arrange in the case studies for half to be medium-sized enterprises and the other half to be small enterprises as case

studies. However, this plan was found to be impractical. After three interviews with small enterprises the author realised that the majority of them did not carry out any kind of reform; they were tired and exhausted from rushing about trying to gain a market share; how could they survive? They still have a basic problem to solve and even the old factory was pestered by product quality, money return, etc. They did not give overall consideration to the enterprises' development strategy and future planning, but said that they did not set aside time and vigour to do anything else.

The reason behind this is that the government does not take care over private small enterprises; the majority of them emerge by themselves and perish by themselves. Because the government does not think that these kinds of enterprises have any value and do not give support, they control main resources and technologies, meanwhile giving up these small enterprises. Therefore these enterprises walk with difficulty in the struggle for survival; especially they do not have any right channels to enable them to gain a loan, which really hinders their development, even influencing their survival. As a result, it is not surprising that small enterprises hardly carry out a reform or re-engineering concept to ensure their improvement and development.

On the other hand, medium-sized enterprises, comparatively speaking, master resource and technology more than small enterprises; they have more capabilities and requirements to carry out reform or re-engineering in order to maintain their survival and development. Some progressive enterprises successfully manage to make the enterprise stand in a high position; they tend to take initiatives carrying out reform or

re-engineering, in order to keep further development and to maintain competitive advancement. Some enterprises seek for survival or get rid of a difficult situation by implementing reform or re-engineering, they might have no choice in doing this. Some of them carry out gradual improvement instead of a radical change. In short, medium-sized enterprises still have room for improvement no matter what kind of change they carry out; their resource, technology and capability decide how far they can go, and their development strategy and future planning judge how quickly they can go ahead.

The second issue of this research is whether the **system of organisations** influences BPR implementation, the answer clearly shows that it definitely affects how they carry out BPR. The state-owned enterprises tend to be more passive in implementing reform or re-engineering, as they face many problems of long-standing accumulation from policy, institution and regulation. This situation is difficult to get rid of overnight, and it really hinders their development in the market economy.

Staff's concept of reform has no sense of urgency, and the complicated relationship holds enterprises back from reform or re-engineering. The majority of them cannot take their destiny into their own hands but still need to ask their seniors for instructions before deciding future development, and they carry out a different type of re-engineering and reform in order to shake off the yoke. However, they still cannot go far unless they change ownership, many of them try to take the step that gives a different name for reform or re-engineering which is happening later, but it

depends on the government how much they want to give up control, otherwise enterprises feed on illusions.

On the contrary, the private enterprises tend to take the initiative to carry out reform or re-engineering. They have sufficient sense of mission to seize any kind of opportunity to improve and develop; they take responsibility for standing together through thick and thin with the enterprises. The enterprises' success or failure will directly reflect their ability and standard; their dream and value give expression to the enterprises' improvement and development. As a result, they maintain vigilance in quiet times to keep forging ahead and, no matter how they carry out radical or gradual change, they emphasise change rather than hesitating to proceed.

They tend to have an open mind over accepting advance management theory for implementing reform; they agree with continuous learning development and they pay attention to employee quality improvement in order to avoid being superseded in the fierce competitive market. Therefore they positively accept a challenge to meet the needs of development, and they realise that they need continually to perfect the enterprise culture build in order to guarantee for the enterprise persistent re-engineering or reform and sustained development. It is conclusive that the size and system of an organisation both influence BPR and reform implementation in a different way. The following chapter summarises and discusses the research findings and contributions of the research, also implications and limitations are considered.

Chapter Six Summary and Discussion

Introduction

The purpose of this chapter is to summarise and discuss the findings, and then present the contributions of the research. The subject of this research effort was how Chinese SMEs currently use BPR and the problems that influence their implementing and adopting the re-engineering concept in order to develop their organisation. In chapter four and chapter five analysis, the study drew extensively on the field studies; however, it did not attempt to indicate the total number of Chinese SMEs currently using BPR, but rather to look in depth at a sample of Chinese SMEs and how they use BPR, together with the existing problems that hinder them implementing BPR. The chapter structures start the synthesis of the research and discussion integrating the findings of the field study with insights from the existing theories. The contributions of the research and the framework improvement are discussed. Then the implications of the research findings and limitation of this research are considered.

6.1 Synthesis and discussion of research findings

This section discusses the findings based on the theories presented in chapter two and other empirical studies in the literature. The generalisation here is to explain in detail the results by connecting the inductive concepts generated from the case study with aspects of existing BPR theories. Walsham (1993) notes the validity of the inferences drawn from cases based on the plausibility and cogency of the logical reasoning used

in describing the result. The section draws out findings from basic BPR understanding as the point of departure.

6.1.1 BPR adoption

The result from case studies shows that BPR has been adopted gradually into Chinese SMEs, although some participants are unaware of BPR theory, they may utilise BPR in the future after having gained brief ideas. On the other hand, if the BPR theory is wildly accepted in various patterns in practice, their understanding decides how they utilise BPR. Some of them are using BPR as a management tool to improve their enterprises; others consider BPR as a reform concept implemented in different types of change in order to obviate difficulties. Therefore BPR is not a management fad for those successful enterprises, but it needs a raised awareness to help administrators comprehend the essence of the re-engineering concept.

Leader and manager should understand that change takes a consistent effort over a period of time and meanwhile it involves certain risks. Top management from state-owned enterprises tends to avoid dramatic change in order to escape risk, thereby emphasising duty as a working attitude to promote them into accepting challenges. Once leader and manager realise the urgency of change, they will guide and encourage staff changes. As a result, the quality of administrators themselves is more important and evidently influences SMEs' development. The literature review shows that a leader plays an important role in BPR implementation. This research

further discusses how they can improve their quality, which in practice is significant.

However, Confucianism is part of the Chinese culture and still strongly influences people's thinking and attitude in adopting new business methods and in assimilating specific management theories. Confucianism emphasises maintaining a harmonious equilibrium with the existing system rather than disrupting it. This opinion is wide compared with BPR prominently advocating to break the original balance and to rebuild the existing process, in order to achieve dramatic performance improvements (Hammer, 1990; Hammer and Champy, 1993). On the other hand, Confucianism exhorts people to follow a 'middle course', making decisions in order to seek long-term survival rather than short-term results, which reduces the possibility of drastic change. Thus it is difficult for Chinese managers to ignore the status quo and incorporate a clean-slate thinking way of doing things (Martinsons and Hempel, 1998).

Owing to culture influences, most Chinese shy away from formal rules and procedures that may hinder their adaptability (Hsu, 1981), and commonly remain with loosely formulated theory with their own way of utilisation in practice, therefore, there are all kinds of BPR concepts being adopted by Chinese SMEs, even if they use only the name of re-engineering without realistic content to achieve their objective. It is far away from BPR's original theory and happens to hold the same view as Martinsons and Hempel (1998). On the other hand, lack of formal training also

causes this situation to be serious. Market and harsh competition force SMEs leaders to consider gaining a market share and achieving profit rather than first improving their quality, this decides how far an organisation can develop.

6.1.2 Existing problems

In order to achieve this research objective and to explore problems related to the implementation of BPR in Chinese SMEs, the general problems existence summary is based on each case analysis. These are staff support, staff quality standard, complicated relationship, government policy and applying for a loan. And then these problems are a further summary of leader improvement, national cultural influence and government policy influence. Figure 6.1 shows the relationship with each other.

The problems of 'staff support' and 'staff quality standards', which reflect human aspects, are more central in presenting the major challenges in BPR (Davenport, 1993); they illustrate that human aspects nowadays seriously influence BPR implementation, so there is the question of how to help employees to participate effectively in the re-engineering process, and at the same time to reduce their resistance, this being the most important task for the administrators. However, there is no doubt that improving leaders' quality standard is the guarantee of successful implementation of BPR and, as a result, managers' quality decides staff standards and finally affects BPR utilisation.

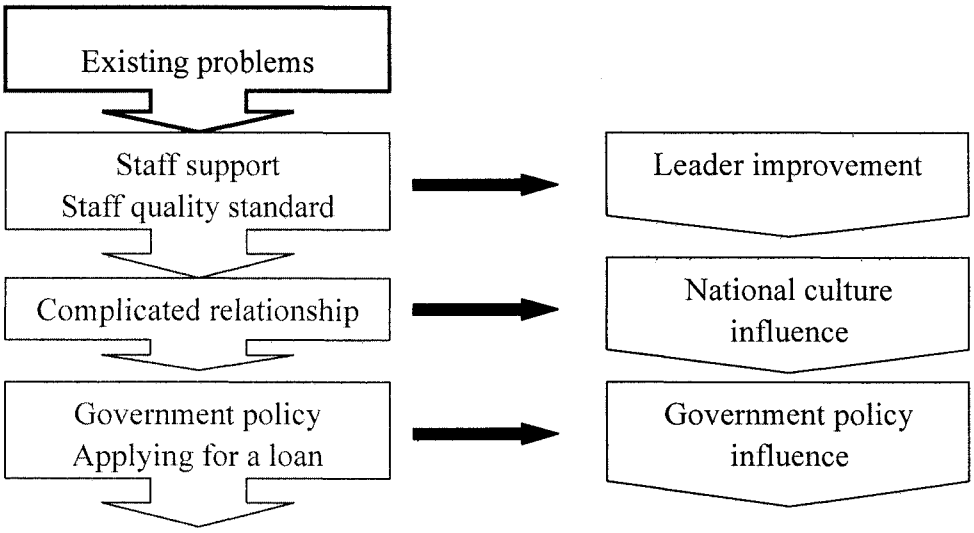


Figure 6.1 The research main findings

The Table 6.1 explains this research as compared with other recent researches, in order to see how leader improvement is significant. These general problems make up evidence emphasising a lack of knowledge, management commitment, training and education. The problems reflect that leader and top manager should renew their knowledge and improve their quality standard in order to change management concept, seeking for long-term development strategy in paying attention to carrying out a training programme for employees. However, this research will offer suggestions as to how Chinese SMEs owner and leader improve their quality in the practical contribution section.

Moreover, the problem of 'complicated relationship' is a typical Chinese feature that enters into every part of society and is part of Chinese culture and lifestyle, and it has an effect when organisations carry out BPR. This 'complicated relationship' impels people both to look ahead and behind to prevent them making serious mistakes,

before they start re-engineering. This involves different aspects in personnel changes. It is very difficult to control the criterion, which is related to human aspects; under these circumstances leaders tend to hesitate in making decisions that in the end may adversely affect work. This problem is deeply related to culture change, along with organisation learning and development from the West with advance management patterns which cause the situation gradually to improve in Chinese SMEs.

This research existing problems	Al-Mashari and Zairi (1999)	Abdul-Hadi, N. *et al* (2005)	Lee, C. Y. (2004)
Staff support	Problem in communication	Lack of knowledge about BPR	Lack of top management commitment
Staff quality standard	Commitment, support and leadership	Affected people not informed	Lack of knowledge
	Problems related to creating a culture for change	Resistance by middle managers	Lack of employee participation
	Lack of training and education		Poor delegation
			Lack of training and education

Table 6.1 Comparison of researches in main existing problems

The problem of 'government policy' is a prominent issue influencing Chinese SMEs carrying out change; the policy is for flexible change and undefined scope making SMEs feel uneasy with utilisation. Sometimes the policy is inconsistent and makes people not know what course to take and in many situations they cannot make decisions quickly. The problem of 'applying for a loan' is part of 'government policy', and is an example showing two faces of 'government policy', and the final

explanation of power control by government without legal guarantee. This circumstance makes for confusion and causes a hindrance effect for Chinese SMEs attempting reform and innovation as a result, making an inquiry as to how guaranteed 'government policy' can be implemented without distortion, which is evidently significant for Chinese SMEs.

6.2 The research contributions

First this research provides extensive understanding of the existing BPR initiative in Chinese manufacturing SMEs, in order to gain an overall picture of how they adopted BPR. Then it proposes a framework with identified aspects that improve BPR implementation in Chinese SMEs. Both aspects achieved the research objectives and composed significant contributions of this research in academia and practice region.

6.2.1 The current stage of Chinese SMEs implementation of BPR

In order to gain information of how Chinese manufacturing SMEs implement BPR and how far they are away compared with Albizu and Olazaran (2006) research, Table 6.2 provides general conception of BPR utilisation in Chinese SMEs. From comparison we can see that Chinese state-owned SMEs tend to be more similar to orthodox BPR in reason, timing and scope of implementation; their general results are more negative than positive in practice, because they are too passive to carry out re-engineering. Either organisation faces intense competition as each needs to

extricate itself from an awkward predicament such as case A; or companies are forced to re-engineer by the head of the organisation, as in case C. However, owing to lack of staff support and complicated relationships among organisations, there is a high failure rate of BPR implementation.

	Orthodox BPR	Europe adapted BPR	Chinese state-owner SMEs	Chinese Private SMEs
Main reason for implementation/ BPR typology	Economic financial problems and crisis	Maintaining or improving the competitive position in the mid/long term	Adapted orthodox BPR	Similarly with Europe adapted BPR in the short/mid term
Change approach	Radical	More gradual	Radical	
Timing and scope of implementations	Short-term and simultaneous in the whole organisation	Short-term for both smaller scope projects and projects limited to IT-implementation in localised processes. Long-term and gradual when the scope is organisational.	Adapted orthodox BPR	Short-term for both small or big scope project
Role played by IT	BPR is IT-centred	IT is necessary for BPR, especially in service firms, but not central to change	IT is necessary for BPR, but not central to change	
General results	Spectacular in theory	Mainly positive in practice Lower social costs	Mainly negative in practice	Mainly positive in practice
Failure rate of projects	Very high	Relatively low	High	Low

Table 6.2 Chinese SMEs adoption of BPR compared with orthodox BPR and Europe
Source: Author

On the other hand, Chinese private SMEs tend to be more like Europe when adopting BPR; as they seek for opportunities to maintain competitive advantage, they carry

out both small or big scope BPR in short/mid term rather than long term, owing to them initially wanting to change, their implementation of BPR general results improves positively in practice and has a low failure rate in projects. Case E provides an example, showing how they keep continuous improvement in order to carry out small scope re-engineering after they have finished BPR implementation.

However, both state-owned and private SMEs use a radical change approach when they implement re-engineering; they also agree that IT is necessary for BPR, but not central to change. In general, Chinese private SMEs improve faster than state-owned SMEs; though both developments are unbalanced, the private SMEs tend to be similar to Europe as to how they adopted BPR, which means Chinese private SMEs are not far behind in using Western management theory and their development has not been a great distance away when compared with that of the West.

The Figure 6.2 shows how Chinese manufacturing SMEs currently utilise BPR and are average in process redesign stage, which is based on Macdonald (1995) opinion of BPR stage dividing. Some Chinese SMEs successfully achieve in the process re-engineering stage such as case E. Some of them stay in the process redesign level, like case A and case C. The others still pace up and down between process improvements and redesign layer. Case B, case D, and case F provide rich and varied details of process improvement, giving readers a brief idea of where they are now.

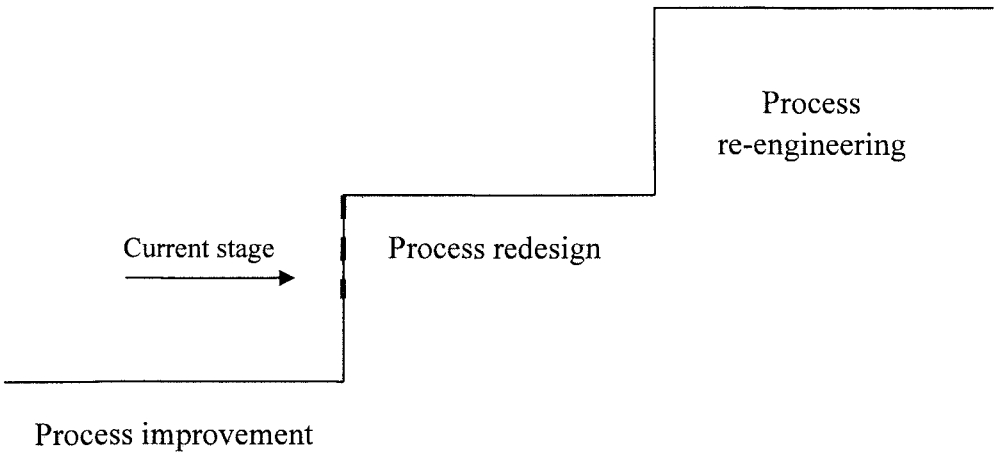


Figure 6.2 Chinese SMEs utilise BPR generally in process redesign stage.

SMEs are generally limited in human, material and financial resources (Raymond, Bergeron, and Rivard, 1998), and have little control over their environment (Dupont, 1986); also the owner-manager is inevitably a key role in SMEs development (Wyer and Mason, 1999). These main aspects are the major constraint for most SMEs implementing BPR. Chinese SMEs face obstruction far beyond the above aspects when they adopt BPR concept and utilise BPR in organisational change. Chinese national culture directly influences the majority of owner-managers' acceptance of BPR theory; it can be played with a positive or negative effect depending on the leaders' quality standard.

On the other hand, Chinese government policies frequently change leaving SMEs with no definite plan to follow, which is another evident feature to hinder them in making long-term development planning, so that they lack the enthusiasm to attempt BPR. These reasons cause Chinese SMEs using BPR theory to pace up and down

between process improvement and process redesign.

6.2.2 A framework of implementing BPR in Chinese SMEs

This framework inherited IT elements from Chang and Powell (1998), and leadership elements from McAdam (2000). The rest of the elements comprise government policy, national culture, and BPR interaction with TQM coming from this research finding. So the framework is made up of these five elements in Figure 6.3, which fit particularly well Chinese SMEs implementing BPR. The discussion is outlined below.

Government policy

The function of government policy is a guarantee for Chinese SMEs implementing BPR. Owing to government policy being unstable, sometimes they encourage SMEs to go ahead with a fast development, and the policies formulated are a real help to SMEs improvement, but when SMEs development hinders state-owned enterprises gaining benefits, they will directly change policy in an opposite direction to stop SMEs advancement. Therefore the government policy is a financial guarantee to Chinese SMEs applying for a loan, and how much loan SMEs gain is really influenced by how far they can develop. Case C shows how a financial problem can deeply hamper the company's improvement. At the same time, government policy is a guarantee of strategy making for stable organisations and displays that the company can make long-term and stable strategy in order to keep continuous development.

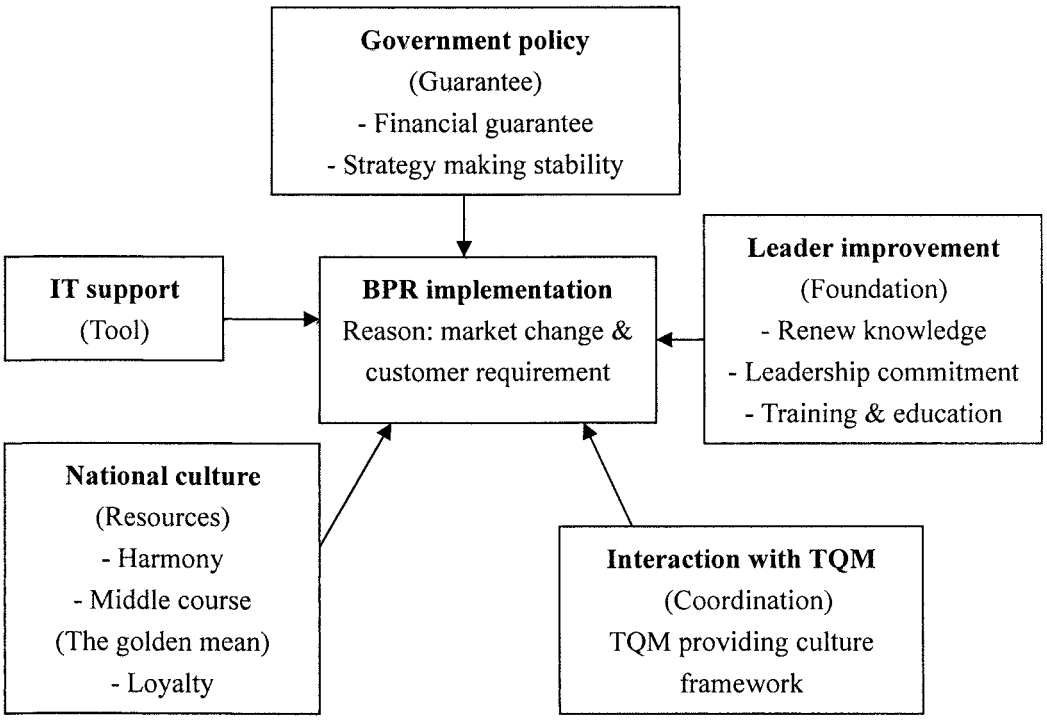


Figure 6.3 A framework of implementation in BPR in Chinese SMEs

Information technology (IT)

The function of IT is a tool to support SMEs utilising BPR. Successful companies often innovate in the use of IT to help organisations implementing BPR. Case E is an example which states some details about IT helping them carrying out BPR. Case B and case C provided information about how IT helps organisations in improving their process. The majority of Chinese SMEs agree that IT is necessary for BPR implementation, but not central for change. Some of them have a sense of urgency to invest and develop their IT facilities, and enlarge the degree and scope of IT utilisation, realising that IT plays an important effect in further rapid development trends. However, some organisations think that without IT they cannot carry out

reform or re-engineering. In general Chinese SMEs realise that IT plays more and more important role in organisational change and development.

National culture

The function of national culture is a resource for an organisation to intellectually use when it implements re-engineering. The research briefly focuses 'harmony', 'middle course', and 'loyalty' three aspects of discussion and how they influence organisations carrying out radical change. The Table 6.3 gives a brief idea of how Chinese national culture is similar compared to Western culture theory. The 'harmony' is similar to that of Hofstede (2001) uncertainty and avoidance of opinion, which emphasises organisational culture stability and focus on existing process change. The 'middle course' is alike to Trompenaars' (1993) neutrality idea; it has a certain freedom of expression also focuses on existing process re-engineering. However, in practice the 'harmony' is a guiding principle for organisations adopting BPR theory; it plays a positive role in promoting BPR implementation. The 'middle course' is a style of conduct, which plays a negative role and hinders BPR adoption. Loyalty is an invisible resource requiring the leader to rationalise utilisation.

Chinese national culture	Hofstede (2001)	Trompenaars (1993)	Impact on organisational culture	Impact on BPR implementation
Harmony	Uncertainty avoidance		Stability	Focus on existing process
The golden mean (middle course)		Neutrality	Certain freedom of expression	Focus on existing process
Loyalty				

Table 6.3 Chinese national cultures compared with Western culture theory

Interaction with TQM

The function of BPR interaction with TQM is coordination when organisations carry out re-engineering. The literature review shows that both of them have strengths and weaknesses, so BPR and TQM can in interaction learn from each other's strong points to offset their weaknesses. For instance, TQM provides the essential cultural framework to enable BPR, so BPR is used as a tool to become a continuous improvement activity that delivers a high rate of increased productivity and quality in a short time. It is testified in practice, such as in case E that relates general knowledge and working experiences about TQM; it provided a solid foundation for the company implementing BPR, and also coordinated change speed and scope in mutual support. Chinese SMEs have more perceptual knowledge about TQM rather than BPR, so the firms carry out BPR and at the same time interact TQM, which is the biggest limit to guarantee implementation success.

Leader improvement

The function of leader improvement is a foundation for organisations carrying out BPR. The Table 6.1 provides that the common problems are lack of knowledge, leadership commitment, training and education. The essential problem is lack of leader improvement. Nowadays, leaders do not even realise that they need to renew their knowledge and change management concept in order to achieve rapid development. Leadership commitment is of paramount importance for re-engineering efforts (Francis and McIntosh, 1997); the approach should be visible and clear to all employees (Wiele and Brown, 1998). Meanwhile, training and education should be taken regularly by both leader and staff at different levels. Evidently, leader improvement is usually highly centralised and dominant in SMEs improvement; it needs to establish a training system especially for top management.

BPR implementation

SMEs implementing BPR are usually driven by market changes; they considerably reduce volatile market pressures (Raymond *et al.*, 1998), and this market pressure should be used to energise and drive SMEs re-engineering change programmes. Meanwhile, SMEs should align the objectives of the re-engineering programme with business strategy in order to address market changes and pressure (Hale *et al.*, 1996). On the other hand, re-engineering in SMEs must start with a customer focus and an analysis of the customer's needs. The traditional loyalty to specific customers is a key catalyst for driving customer informed re-engineering (Raymond *et al.*, 1998).

Also the closer loyalty can lead to increased SME employee knowledge about customer requirements, and then be incorporated within the re-engineering effort. SMEs have inherent flexibility features that can be effectively used in implementing re-engineering. For instance, they have strength in decision making and the relatively rapid implementation of decisions, which can lead to BPR, related to market changes (Raymond *et al.*, 1998). However, the lack of training and education of SME personnel in change management will hinder the effectiveness of this rapid decision-making and further influence re-engineering utilisation.

Conclusion

This research testifies that Chinese private SMEs can benefit from re-engineering and are considered more receptive to implementing BPR. A framework is thus developed to identify and investigate factors that enhance or inhibit BPR performance in Chinese SMEs. Most of them tend to exhibit a less bureaucratic mode of operation, and flexibility decision-making is of great value to Chinese SMEs undertaking BPR. Within top management support, previous quality management experiences and national culture suitable utilisation will increase the chances of success in BPR. However, lack of financial guarantees, unstable government policies, and less leader improvement will inhibit BPR performance in Chinese SMEs. The propositions developed here allow organisations to identify issues and test pragmatism, in order to enrich and refine the framework so as to assist Chinese SMEs in undertaking BPR.

6.3 Implications of research findings

This research has shown how Chinese SMEs currently used re-engineering in organisational change. It has presented the findings of Chinese SMEs of how they understand, adopt and implement BPR theory. It has provided a deeper understanding of the national culture and government policy responsible for Chinese SME decision to adopt and use BPR in radical change. It has developed a framework for conceptualising the adoption and use of BPR in Chinese SMEs. The study results indicated that leadership improvement is significant in deciding organisational adoption and use of BPR. While political reform is an essential means to solve thoroughly the artificial problem making in an organisation's reform. The findings and framework development articulated here have important implications for both researchers and practitioners.

6.3.1 Implications for research

From an academic researcher's perspective, the findings suggest that BPR theory should consider national culture effect in BPR adoption and use in SMEs. Although the implementation of BPR in SMEs has been brought forward by leaders' vision but the case results have shown the importance of national culture and government policy influencing Chinese SMEs decision to adopt and use BPR in organisational change. The existing BPR theories were developed with a concept of the Western situation but do not provide adequate explanations in a different culture society of how they implement BPR, and little or no previous study has been done to examine

the applicability of these frameworks to Chinese SME context.

The existing framework (Chang and Powell, 1998) is limited in discussing national culture influence, which is a valuable aspect of SMEs utilisation of BPR and the political factors' influence (McAdam, 2002) is rarely considered in BPR implementation. The proposed framework includes government policy, national culture, BPR interaction with TQM, and leader improvement, each of these factors was shown as having an influence on the practice of adoption and use of BPR theory in Chinese SMEs.

However, the framework was generated by examining only a few cases, albeit in depth, therefore empirical validation and elaboration of these concepts in other settings are clearly needed. It is necessary to investigate BPR utilisation in different culture societies, so that more practical experience summaries and comparisons will sharpen and enrich the BPR theory development. Therefore this research made a useful starting point, Understanding national cultures that influence adoption of BPR allows researchers to explain why different culture societies carry out BPR to a varied extent.

6.3.2 Implications for practice

BPR concept utilisation plays an important role in Chinese organisational development. The re-engineering concept provides a wide-ranging extent used in

practice, and it has the potential to change Chinese management style. BPR theory emphasises empowerment to employees with greater access to information, enhanced knowledge, and the freedom to perform their jobs; this opinion really impacts on management behaviour in Chinese organisation. Meanwhile, BPR stresses that communication is another vital aspect to lead the success of implementation (Carr and Johansson, 1995), it should be throughout the change a process at all levels and for all individuals (Davenport, 1993), and therefore, it will gradually change the Chinese management style from hierarchical to informal.

This research has also identified leadership improvement and management support that make up a crucial element to influence SMEs adoption and the use of BPR; it is realistically significant to remind Chinese SMEs' administrators to renew their knowledge and enhance their quality which is important in guiding the organisation as to how far it can go, also it has practical implications in suggesting that local government should build a training system and learning programme for SMEs administrative levels. Because SMEs contemplating using BPR should explore and share knowledge and experience, they need such kind of opportunity to discuss and engage in initial experimentation that can significantly aid their own learning process and better understand the degree to which the re-engineering would be improvable within the present situation and work practices.

The culture change is another suggestion from research findings; it is a permanent

solution to organisational and even societal change. The basic means to promote culture change in Chinese is political reform. There are many scholars who point out that, without an independent control system, the person who enforces the law without supervision has no guarantee of impartiality and honesty. Facts fully testify that carrying out only economic reform without promoting political reform has no institutional guarantee of economic reform. There are many problems emerging which are related to systems in economy reform, no matter who is implementing concrete policies, so political reform is an absolutely necessary step for Chinese development. Recently, the Chinese government evoked 'Xishan meeting' specially to discuss this topic, which means that they also realise that reform should balance.

The framework developed and presented here suggests that before the implementation of BPR, managers should articulate national culture and government policy influence with the adoption of BPR and assess the resultant organisational consequences of BPR utilisation. A better understanding of these factors may enable practitioners to formulate strategies for improving the adoption and usage of BPR in organisations. The framework is sufficiently general to be applicable to a range of situations around the adoption and use of BPR; it has provided valuable insights for practitioners, detailing the factors that influence the decision to adopt and use BPR in organisational development.

6.4 Limitations of this research

The case study approach provided new insights into the factors that influence Chinese SMEs decision to adopt and use BPR in organisational development. Because of case study methods, the interview was restricted to a certain level compared with questionnaire data collection and therefore it lost details in some aspects. The interviewer cannot insist on getting to the bottom of the matter in order to avoid offending owners and top managers. On the other hand, the author had difficulties when talking to the staff and employees, because they are vigilant when a stranger visits without an accompanying leader. However, if the manager follows the author when looking around, nobody wants to talk without a free atmosphere.

Meanwhile, the majority of organisations were hesitant regarding the interviewing of employees or team leaders, so the research's main findings lack support from staff and employees. For instance, leader improvement is the foundation for an organisation implementing BPR. The interviewees provided positive information to confirm that leader improvement is the main factor influencing organisational development. The author did not receive any complaints regarding leader improvement. As a result, the framework of this research is not rich enough; the data collection of the questionnaire can address this limitation. However, how can one guarantee data reliability from a questionnaire, which is another big issue when doing research in Chinese culture society?

Owing to knowledge limitation, this research did not consider how Lean Thinking could be interacted with BPR in Chinese SMEs. Lean provides different concept in customer focus and organisational development compared with TQM, and it is useful especially for Chinese enterprise. Lean emphasises systematic waste elimination and problem solving, it has realistic significance which is suitable for Chinese government policy to "build saving society". It has long-term vision to create a learning organisation to share knowledge, which is a weak aspect of Chinese enterprise learning and further development.

This research also has a lack of details compared with Western enterprise how they utilise BPR through case study, from that we can see what are the differences and what we can learn from each other. Moreover, the research did not consider comparing BPR implementation with other paradigms; the quantitative analysis is also disregarded. These aspects make this research not comprehensive enough to cause some regret for future studies remedy a defect. The next chapter will discuss practical contributions; reflect on this research and in the end to provide conclusions.

Chapter Seven

Contributions in professional practice and Conclusions

Introduction

This chapter mainly focuses on practical contributions of the research. It briefly discusses how to apply the framework and the significance of this framework used in Chinese SMEs, and then considers the relationship between each factor, and why it is suitable for them to utilise. Then it concentrates on this research's main findings, providing suggestions as to how to enhance leader improvement and analyse Chinese culture essence effects when organisations adopt and utilise BPR; with regard to government policy aspects, the researcher makes recommendations to solve overall general problems during Chinese SMEs implementation of BPR.

After that reflection on the experience of conducting this research is described, the research direction decisions and methodology selections are interesting to discuss. The process of choice participators as case studies and the transcribing and sorting out of data are the major problems in the research last section and important lessons learnt from this research are also mentioned. Finally, further research provides some advice for further exploration. The conclusion makes general ideas about this research, with the research findings, contributions in academic and practice range; research issues all to be considered. The details are expounded below.

7.1 Applications of the framework

The framework (figure 6.3) of this research contribution is significant in practice; it is an especially Chinese feature in national culture and government policy influencing BPR implementation. These two aspects are resources and a guarantee for Chinese SMEs radical change. Over a long period of time, Chinese SMEs did not have their own framework to guide BPR utilisation; it had only BPR theory or implementation experiences used for reference in relation to the West. This framework provides a basic principle for using BPR in Chinese culture society, so that the owners and top managers clearly realise what are the main aspects influencing an organisation carrying out re-engineering, it reduces their exploration time. Once they utilise the framework, in practice, it will help to complete and enrich this framework.

On the other hand, in order to utilise the framework effectually, leader improvement is an essential foundation for an organisation implementing BPR. Once they understand government policy trends and grasp the essence of content, they will capture a position of strategic importance. For instance, in case E the top managers really comprehend the government's policy for SMEs development trend; they gain the opportunity and benefits from that, so they lay a foundation in financial accumulation for further development. Therefore the government policy is a guarantee for an organisation utilising BPR.

Meanwhile, leaders and top managers should realise that the national culture is a resource which they can use flexibly in order to carry out re-engineering or reform. IT support is necessary to assist an organisation in implementing BPR; TQM provides culture framework to enable BPR and both interact and coordinate with each other, which makes for harmony when organisations are utilising BPR. Also leader improvement decides why an organisation should implement BPR and how they achieve the re-engineering process or flexibility using BPR concept etc. As a result, leader improvement is a key factor for a suitable framework when used in a Chinese SMEs context. These discussions explain relationships in each element.

The framework approach in an actual situation in Chinese culture society and is more suitable for Chinese SMEs utilisation in practice compared with Chang and Powell's (1998) framework. This framework particularly focuses on government policy, national culture, and leader improvement--three viewpoints-and these three aspects are a big issue which evidently influences Chinese SMEs and how they implement BPR; it stands in a practical perception in dealing with daily work rather than in academic detailed discussion.

For instance, national culture pervades everywhere affecting an organisation implementing BPR; they use a culture of 'harmony' in making decisions to see whether they should adopt the BPR concept in order to carry out radical change, including risk attitude and strategy making. Once they enter the operation, they need

to use a 'middle course' as a method to handle concrete matters, which embodies how much empowerment can be taken etc. Therefore national culture covers many details in Chang and Powell's (1998) framework about culture aspect. It is common for Chinese leaders and managers to consider how to utilise national culture rationally as a resource in BPR implementation. This is an example to explain why the framework is favourable for Chinese SMEs utilisation.

7.2 Practical contributions

From a practical point of view, this research's purpose is to focus on what problems Chinese SMEs face when they implement BPR and help them to avoid recommitting the same errors, at the same time to provide some examples to see how these enterprises solve the problems, so that they gain brief ideas and experiences from the case study. Based on the research finding, a framework is proposed to Chinese SMEs to guide them in implementing BPR.

Furthermore, the research focuses on leader improvement, national culture and government policy--three aspects-to discuss how they can improve, in order to help Chinese SMEs realise the problems and essentially solve them. Leader improvement is a foundation, national culture is a resource, and government policy is a guarantee for an organisation carrying out re-engineering and further development. These three aspects are discussed respectively below.

7.2.1 Leader improvement

From previous existing problem section analysis, the leaders' improvement is more significant in practice, although the leader plays an important role during BPR implementation, giving rise to attention in theory. However, this research from a practical point of view discusses how to carry out leader improvement, in order to provide the method as an example to be utilised by Chinese SMEs. Nowadays, rapidly changing global business trends have created needs for continuous learning and training. Shandler (1996) remarks that a more effective approach for training is to embrace an organisational and process transformation model that recognises and appreciates the interplay in four critical areas: the management system, the social system, the behavioral system and the technical system.

Unfortunately, Chinese SMEs still lag behind in building a system of training programmes and society also does not pay attention or even try to provide more regular help. As a result, local government should fulfill more obligations by taking the initiative and utilising the knowledge resources of Universities and so set up a regular system of training programmes, and then organise SMEs' leaders and administrators by periodically running a training course that would focus their interest and introduce international new development strategy and management improvement trends, in order to guarantee SMEs' leaders and administrators overall quality standard enhancement.

At the same time, nongovernmental effect is another fresh force which cannot be ignored, along with market demand for various changes and competition standards in the flexible and prompt service that will bring infinite business in a training consulting trade; it already appears that this kind of trade provides training and consultation for foreign enterprises in the big cities. The question is how it can spread into SMEs, and base their feature on making service. Meanwhile, how can they change their concept to adopt this service, which needs official and unofficial effects mutually coordinated and supported to make joint efforts? Along with a training system formed for perfect SMEs administrators, who will gain benefits and improve their quality standards and regularly renew knowledge, this training system will guarantee an effect to supervise leaders and urge them to go ahead.

The key point here is how to form a habit that becomes common practice in making a continuous learning and training atmosphere. It is necessary to make known the importance of training progress; this depends only on the unofficial effect which yields lower results, even to provide detailed training programmes, offered at a reasonable cost. SMEs association, which belongs to the government or local government, should play an important role in popularizing this project. They should encourage SMEs' administrators to join the training programme, which provides some benefits for them. On the other hand, they should force leaders to train regularly, otherwise any application for a loan will be ignored. This learning and training atmosphere should help towards a change of culture in the long run.

7.2.2 Culture influence within BPR

This research generally focuses on 'harmony', 'middle course', and 'loyalty' three Chinese culture aspects influencing BPR implementation. The culture of 'harmony' is a **guiding principle** for an organisation adopting BPR theory. To acquire culture influence, the Chinese tend to accept a situation as it is (Hofstede and Bond, 1998) and society promotes harmony and preserves face in order to maintain the style of harmony-within-hierarchy stable organisation (Bond and Hwang, 1996; Hsu, 1981). Confucianism considered that equilibrium is the great foundation of the world, and harmony is its universal path (Chan, 1963); as a result, the Chinese adjust their environment in order to avoid catastrophes and meanwhile they follow the Confucian-based change model that is cyclical and continuous (Marshak, 1993). Owing to a lack of rapid and major environmental changes, the majority of Chinese managers tend to concentrate on maintaining harmony rather than radical change.

Therefore, the culture of 'harmony' decides how much the Chinese adopt BPR, and because of location, knowledge, etc. influencing aspects BPR is different in the extent of its adoption; it causes people to be at their ease in BPR understanding. In practice, from cross-case analysis we can see that the 'harmony' is used as virtue and capability is widely approved. On the other hand, the 'harmony' is a means of how to use and reflect user wisdom, especially in BPR utilisation; it plays an important role in coordinating with diverse aspects of relationship and balancing various respects of benefit. This point compares with 'middle course' and is the same result achieved by

different methods.

The culture of 'middle course' is **the style of conduct** and the mode of thinking broadly adopted by Chinese. The 'middle course' as the mode of thinking is a twin with 'harmony', and both supplement each other. The previous analysis provided that the 'middle course' as the mode of thinking plays a negative effect in organisational change. The 'middle course' tends to remain undecided and looks forward and backwards; it stands for appropriateness of going neither too far nor not far enough. In practice this view often affects the work adversely when an organisation is making decisions for implementing radical change. However, it shows a positive effect to refrain from bias and partiality in order to coordinate integration of reform or re-engineering.

The 'middle course' is displayed by the majority as a style of conduct. For instance, the leader or manager adopts the way of implementing reform or re-engineering that the majority of employees could accept even if it slowed down the speed of change. From the employees' standpoint they would not give a clear-cut opinion to approve or disagree with action planning, so the manager would not gain any benefit from mutual discussion. Normally, organisations emphasise harmony and the leader and manager deal with operations using a 'middle course', even if the organisation implements radical change. The administrative levels also stress that popular feelings should remain stable, which is the first task, otherwise how can they continue reform

and go deeply into re-engineering? Therefore, once the reform or re-engineering strategy is in the making, the concrete operation tends to take the middle way, in order to avoid offending the majority of people's benefit. The 'middle course' is a means of carrying out 'harmony'.

The culture of 'loyalty' is an **invisible resource** to influence the Chinese management style. The Chinese management systems are in the Confucian tradition of paternalism, so Chinese bosses treat their subordinates like members of the family (Chen, C. 1995). Therefore Chinese organisational form is rooted in a culture of loyalty and obedience rather than one of responsibility (Martinsons and Hempel, 1998). The top management is obligated to provide explicit directions for their subordinates and look after their welfare. Employees reciprocate by obeying their bosses and demonstrating their loyalty, in order to acquire scarce resources and exploit new opportunities. The loyalty and obedience are criteria to measure employees' and even managers' promotion prospects; it is a universally accepted principle by the Chinese.

As a result, employees typically respect and fear their bosses and are comparatively content to receive explicit instructions from their leaders. Few of them will question the instructions or take part in open discussion, so they cannot be expected to initiate activities or make major decision on their own; therefore BPR effort in China uses a strictly top-down approach. Owing to the Chinese organisational hierarchy having

vested strong authority in the top managers, it promotes the effective initiation and direction of a re-engineering effort. The culture of 'loyalty' influences employee participation in decision making and creates instability by tampering with well-defined and accepted roles (Martinsons and Hempel, 1998). Meanwhile, they are uncomfortable in assuming the risks associated with independently initiated actions.

In theory, the culture of 'loyalty' plays a negative effect in BPR utilisation. However, in practice great weight is attached by leaders and managers; they think that staff loyalty will promote organisation implementing BPR and emphasise employee contribution and responsibility to the organisation rather than sharing of power and opportunity. Therefore the culture of 'loyalty' on the surface plays a positive effect in organisational radical change, because leaders and managers know that unity is strength. In the depths, 'loyalty' plays a negative effect on influence, as it strongly displays what is not equal in spirit and consciousness between leaders and staff in the organisation. Therefore, the culture of 'loyalty' is an invisible resource, which depends how leaders understand and correctly utilise this resource.

In short, the culture of 'harmony' is a guiding principle to influence organisations as to how much they can adopt BPR theory, because location and knowledge background differences evidently affect BPR utilisation. The 'middle course' is the style of conduct, although sometimes it displays the mode of thinking, when it is

used for a style of conduct which is generally accepted by employees and also promotes BPR implementation. However, it is used in the mode of thinking, which is generally considered to hinder organisational radical change, especially in the initial stage. The culture of 'loyalty' is an invisible resource to influence organisational management trend, and further indirectly affect BPR utilisation; it is a valuable resource depending on how, in practice, it is used by the leader.

7.2.3 Problem solving

From a practical standpoint, this research not only displays the general problems in Chinese SMEs when they carry out BPR, but also endeavours to seek the way to solve these problems. The previous analysis shows these five general problems (staff support, staff quality standard, complicate relationship, government policy, and applying for a loan) are all related to artificial factors. The major problem is 'government policy'; from formulating the policy until implementation this process is without legal guarantee. The rest of the problems focus on culture change, requiring top managers to improve their quality, so that the organisation makes essential progress. Therefore, once the main problem of government policy is solved, it is necessary to spur on culture change; this seems a giant project, however, and this research focuses on key points of discussion.

During data collection, the author discussed this topic especially with some senior officials of the tax department; they had a tacit understanding about solving this

problem. Everyone knew the root cause of the problem, particularly those officials working in the system, who were fully aware that situation is imminently critical--for example 'people do not follow principles when doing business. They do not seriously implement an honest policy, as a result they might violate the law and in order to evade punishment go through dubious channels to gain what they want.' Owing to lack of a control system, the department of enforcement is generally corrupt and degenerate; this causes a vicious circle making this phenomenon add fuel to the fire.

On the other hand, government policy formulation frequently changes and contradicts itself, which is not only a reflection in SMEs' policy making. The policy drawn up partially within different trades and regions, even within the nature of an enterprise, requires different standards and measurements. For instance, some SMEs have difficultly in applying for a loan; they think that because the government is not interested in their trade, as an alternative some private and high technology enterprises may find it easier to grant a loan. The policy is implemented often making what is already good better still; it does not give help where it is badly needed, so many enterprises attempt to exploit a loophole of policy to their own advantage. Off the record, some of the interviewees told that this phenomenon could be found everywhere.

As a result, the point at issue is how to set up a legal control system in China. There are hosts of articles discussing this problem outside China (Qinglian 2001) but it is

still a taboo topic in mainland China and, although the majority of officers knew the way to solve this stubborn disease, because they are selfish in protecting their privileges, China has lost more than one opportunity to solve this problem permanently. There are many scholars suggesting that China should carry out a political reform from the roots to change this situation but it cannot implement economic reform in a limp along fashion. They pointed out the need for a political reform with an independent control system, in order to restrict abuse of power by each executive branch.

7.3 Reflection on the experience of conducting this research

This section discusses what has been learnt about the method of the study and the research process. The first important thing in conducting this research was to decide the research direction, which focused on management strategy and how it influenced Chinese SMEs implementing BPR at the beginning, to consider data collection limitation and reliability as well as practicability. Then the research shifted to organisational training and learning development, also to regard the narrow contribution for an organisation implementing BPR. The research further changed to problem solving in order to emphasise practice to help Chinese SMEs utilising BPR. This is a learning process in which the author improved research skills by DBA training courses and in the end made clear the research direction.

Secondly, the methodology of this study also was changed from a quantitative

approach to a qualitative method. In order to find existing problems when Chinese SMEs implement BPR, the quantitative approach seems appropriate in utilising this research, but the organisation's development standard and quality is not uniform, so it cannot guarantee that the data collected is valid, because of their knowledge, understanding and working experience that will restrict the filling in of the questionnaire. On the other hand, the reliability of data collection cannot ensure that it was the right person who answered the questions. As a result, in the end, the study chose a qualitative method to carry out this research; therefore it cannot avoid causing research limitation.

The process of choice participators as a case study was difficult, the organisation should successfully develop this area so that they might be happy in adopting the researcher, and otherwise they would not be given the chance of protecting their 'face'. Secondly the author should interview the owners or top managers, otherwise the research cannot gain a general picture and details of process change, because BPR implementation is normally carried out in a top-down management system. Owing to Chinese culture society being in hierarchical relationships, in order to arrange interviews with owners or top managers, the author uses every relationship throw into this research. It is a general feature of doing research in Chinese society, also it is a barrier to select many organisations.

The amount of time taken to transcribe (example in appendix C) and subsequent

sorting out of the data was overwhelming. Normally a thirty minute interview took up to three hours to transcribe, which was quite daunting at the time. Some of the interviewees talked wide of the mark, they might not actually know BPR theory, but they glossed over their weakness; for example, in case D, they revolved round management theory-free talking. In order to respect them and protect their 'face', also to keep good relationships for further cooperation, the author has to endure their long explanation. Sometimes they tried to lead the topic to put the interviewer into a passive position. These are lessons for the author to learn of how intelligence and flexibility in conduct can interview in future research.

It is clear that at the beginning of the study the researcher's understanding of BPR theory was insufficient, as the study progressed the author gained more confidence and knowledge of BPR theory from literature review, and also from other attempts to bridge this knowledge gap. Additionally, the supervisors provided some major articles which proved an invaluable source of guidance, meanwhile clarifying qualitative and quantitative approaches used in this research, so that the author has a clear direction in both research focus and methodologies.

The important lesson from this research was that the author learnt about the research method and the research process in an open and flexible way. She changed the previous analysis structure in the light of the emerging data, so that this study impelled the author to shift from naïve research to more knowledgeable research. On

the other hand, the DBA training course provided useful guidance in research methodologies' utilisation; it widened the researcher's outlook as to what kind of research approaches can be chosen and how they can handle them with ease. Meanwhile, the DBA training course also invited some guests to speak to share their research experiences, in order to help new researchers gain a brief idea of research process and issues that should be given attention. The author made great progress in each step of training.

Overall, this research was led by interpretivist principles; it is an available strategy for studying complex phenomena such as the adoption and use of the BPR theory in Chinese SMEs. The interpretive approach can understand the factors, in deeper and broader ways influence the adoption of the BPR, so that this study has the ability to contribute significantly to cumulative knowledge in the BPR implementation field, especially how it is used in Chinese culture society.

7.4 Further research

The research has drawn conclusions about the adoption and use of BPR in Chinese SMEs and has laid a foundation on which further studies could be undertaken. It has identified national culture and government policy factors and existing problems that facilitate or hinder adoption of BPR theory. The focus of the present study is on the adoption and use of BPR in Chinese SMEs. Additional research could be conducted to determine if other kinds of innovations in method or theory are affected by these

factors. From a broad study point of view, the research should focus on how BPR is utilised in different cultures of society, in order to enrich BPR theory implementation, and generally examine this study.

The study has developed the framework of BPR adoption and use in Chinese SMEs. The main strengths of this framework are logical and the derivation of its factors from the empirical case studies. Although the case-based investigation of the framework has provided insights into the factors influencing adoption and use of BPR in Chinese SMEs, further empirical study is needed to assess the validity of the theoretical framework proposed in this study in order to develop an appreciation of the relative contributions of the framework and mode's construction. Meanwhile, the framework and propositions can form the basis of larger scale studies to consider the validity and applicability in order to improve and refine same.

Future researchers are advised to consider carefully factors that emerged from the case study, these factors may not have been important in contexts in which the BPR theory originated but appear to have important effects in practical implementation in Chinese SMEs examined in this study. Future research could also examine the scope of BPR in mediating the relative importance of inter-organisation re-engineering; these existing factors influences and problems can enrich BPR theory utilisation. Also, further research is needed to develop effective cost benefit of the adoption and use of BPR in organisational development and to help SMEs evaluate their needs

requirements. Finally, the researcher suggests that national culture and government policy factors' influence be applied in international inter-organisation re-engineering, which is significant to test its generalisability and analyse its differences in multi-culture context.

7.5 Conclusion

The central concern of this research has been to gain a deeper insight into current BPR usage in Chinese SMEs, the problems existing during implementation and the factors that influence their adoption in organisational development. The study is based on empirical data in order to develop a theory that considered the national culture and government policy factors, which explained the adoption and use of re-engineering concept in Chinese SMEs. Meanwhile, it is aimed at a solution of existing problems to present suggestions for human resource quality improvement and culture change means. The author has used empirical evidence to argue why these categories helped her to understand better and explain BPR adoption and usage in Chinese SMEs.

The research has provided chronicles of the perceptions and experiences of Chinese SMEs adoption and use of BPR in organisational development. Zeller (1991) states that studies with an interpretive perspective do not report 'data', they report 'scenes', which means that researchers should seek appointments over time with participants in their surroundings (Zeller, 1991 cited in Miles and Huberman, 1994). Hammersley

(2004) suggests that the phenomenon intended to describe or explain theories, which should represent accurate and valid features. This research has presented the current picture of how Chinese SMEs used BPR in practice from the perspective of cases examined.

The conclusions of the study were based on the analysis of the SMEs studied. It is not the goal of an interpretive study to make generalisations from the case studies, but rather to offer understanding and insights about the adoption and use of BPR in Chinese SMEs. The broad description of case analysis provides rich details, allowing readers to make decisions regarding transferability of the research (Ryle, cited in Geertz, 1973). This research has presented significant progress in BPR usage and goes towards explaining existing problems and the influencing factors during BPR utilisation in Chinese SMEs.

The findings provided theoretical and practical insights into the adoption and use of BPR in Chinese SMEs. The study has contributed to the existing body of research on BPR implementation in general and, in particular, has emphasised BPR utilisation in different cultural societies. Also, this research stood from a practical point of view to provide some suggestions in order to solve problems existing when Chinese SMEs are implementing BPR. Finally, this research has discussed what it is hoped will be a continually expanding body of empirical evidence that can increase knowledge of BPR utilisation in practice.

The significance of this research contribution is to present a framework for Chinese SMEs utilising BPR; it is based on research summary to gain five major factors which reflect the importance that has been attributed to the issue of corporate implementation. The factor of leader improvement is the foundation for organisations carrying out BPR; their knowledge and quality decide how far SMEs can develop. The national culture is a resource for enterprises to use when they implementing radical change. There are different elements, which plays distinct functions during re-engineering. The government policy is a guarantee to provide financial assurance and strategies, making stability for Chinese SMEs seeking reform or re-engineering implementation. The other two elements are commonly realised and utilised in practice, IT is a tool to support organisational change, and BPR interaction with TQM plays a function of coordination, in order to overcome their own shortcomings by learning from others' strong points.

The research provided another significant contribution in practice, it summarised the problems which generally exist in Chinese SMEs when they are implementing BPR or reform and then gave a detailed analysis of the reasons behind this and how they relate to each other. The five general existing problems comprised staff support, staff quality standard, complicated relationship, government policy, and applying for a loan, which reflects artificial factors that make these problems. Therefore to seek a permanent solution to the problems, this research put forward that Chinese SMEs should carry out leader improvement first, and then consider changing their culture,

which is a difficult task. However, Chinese culture emphasises harmony and balanced development, so China cannot permanently ignore political reform after nearly thirty years of economic reform. It is a root cause which hinders Chinese SMEs from implementing radical change and further advance.

This research also presents the different size and system of organisation that would influence Chinese SMEs utilising BPR. Medium-sized enterprises tend to adopt and implement re-engineering more easily than small firms, because they have more resources compared with small firms. Chinese private enterprises tend to use initiative when they carry out BPR, and their objective and approach to BPR implementation is similar compared with Europe when they adopt and use BPR. In an opposite direction, state-owned enterprises tend passively to utilise re-engineering, and they have a certain distance compared with private enterprises, and similarly with orthodox BPR implementation. Although, Chinese SMEs generally stay in a process redesign stage some of them do not currently consider using BPR, they do agree that BPR theory is full of vitality in organisational change and development. The majority of them are interested in attempting BPR later on.

The other issue of this research is *Guanxi* which plays a very important role in influencing research quality and scope at certain levels and how deeply and widely the relationships restrict research direction, methods, even objectives. On the other hand, *Guanxi* is also the guarantor of reliability in data collection. Owing to an

influential friend's recommendation, the interviewees gave careful consideration to the interview and provided more real information and relevant data, avoiding discrepancies; meanwhile they offered the opportunity for the researcher to look around, in order to give 'face' to the person who arranged the interview. So *Guanxi* plays an important role in this research, and also makes for vigilance when doing research using the qualitative approach in Chinese culture society. Overall, the research provides some guiding principles and points out major problems that exist for Chinese SMEs to be used as a reference when they implement BPR.

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Appendix A

Interview questions guideline

Introduction

My research topic is how SMEs carry out BPR. The theory of BPR was known in 1995, State-own enterprises utilised "restructure" to implement certain process reform or call it enterprise re-engineering. Currently such as Shanghai Baogang, Haier group, Weibang group, these big enterprises implement BPR. BPR theory will tremendously improve costs, quality, service and give speed to the organization. Therefore I think that BPR theory is wide and practical when utilised, because every enterprise will consider redesign, restructure or re-engineering after a few years. Also BPR could re-engineer in human resource, technology, structure, enterprise culture, etc.

On the other hand, BPR can be used in one department, multi-departments or different organisations. So BPR theory cannot only be restricted to concept, it may focus on long-term and the overall situation combined with development and cooperation, the theory is utilised in every organisation. However, the majority of enterprises realise that BPR may cause earthshaking changes, actually, the enterprise should find main point as breakthrough, such as strategy, IT or process, it may not extend BPR concept. Currently it is strange that many enterprises carry out ERP without BPR implementation, in fact the enterprise needs to re-engineer in organisational structure, business process, management etc. in order to pave the way for ERP utilisation. I believe that every enterprise has their own reform and re-engineering stories, so thank you very much for allowing me change to tap into the material of your enterprise story.

Interview questions with owner/manager

1. Could you introduce your enterprise first?

(1) When was it founded? _____

(2) Number of employees? _____

(3) Size of enterprise? _____

(4) Ownership? _____

(5) Type of manufacturing? _____

(6) Major products? _____

2. Did you know of BPR theory?

3. What was the most important reform/BPR implementation recently?

(1) What do you focus on when you implement reform/BPR?
(Prompt the interviewee)
Internal – Quality / Management / HR redesign / IT
External – Customer / Market share / Competition

(2) How did you carry out reform/BPR?
i. What was the background for your enterprise carrying out reform/BPR?
ii. What were the main steps?
iii. How did you persuade staff to support the project?
iv. How did you coordinate with the different departments?
v. How did you redistribute resources and profits?

4. What are the main problems when you carried out reform/BPR?

(1) Marketing
(2) Human resource
(3) IT
(4) Process
(5) Quality

5. Could you explain in detail the main problems?

6. How did you solve this problem? Or how do you plan to solve this problem?

7. How do you think you could improve SMEs leader capabilities?

(1) Training
(2) Lecture
(3) Entrepreneurial organisation

8. What is the specific interaction between IT and SMEs utilising BPR?

9. What is the dialectical relationship between radical change and continual change? For example, how do they both interact in your organisation?

10. Chinese culture emphasises 'harmony' and 'middle course', could you talk about how they influence your enterprise reform/BPR?

11. The enterprise culture encourages 'loyalty', could you give your opinion of how it influenced your enterprise reform/BPR?

12. Could you tell, briefly, what is the future planning of your enterprise?

Appendix B

Questionnaire

For

Business Process Re-engineering (BPR) as Used by Chinese SMEs

Business Process Re-engineering (BPR) theory ("*Re-engineering is the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measures of performance, such as cost, quality, service, and speed.*" *Hammer & Champy 1993*) was widely utilised by big state-owned enterprises reform after 1995 in China. Due to misunderstanding and implementation deviation, there was a high fail rate compare with success.

Did they use this theory in SMEs? How they utilise it? What do they focus? What problems do they face? Etc. Through this survey questionnaire, the author wants to take an overall research in JiangSu Province in order to gain a general information about Chinese manufacturing SMEs process changing track, in order to give the government, local government and enterprise clear direction when they formulate a policy to support them.

This survey is designed to be answered by the owner, manager, or other person most familiar with the BPR theory in your enterprise. If your organisation does not carry out BPR, you still can fill in some sections of the questionnaire in order to display your firm change route. Answer the questions by ticking or writing the most appropriate response/s.

Thank you for your help.

Hong LIU
DBA Student
Newcastle Business School
Northumbria University

Section A: Enterprise Information

1. Location of City _____

2. Enterprise description

Name of enterprise	Number of employees		Size of enterprise		Ownership	
	Less than 100		Small-size enterprise		Single-venture privately	
	100-250		Middle-size enterprise		Joint investment privately	
	250-500				Collective enterprise	
	More than 500				State-owned	
					Privately partnership	
					Other (Please specify)	

3. Type of manufacturing _____

4. Annual turnover_____

Section B: Understanding of the Business Process Re-engineering
This section looks at the ways in how enterprises understand BPR and how BPR deals with some similar and relation concepts.

1. Have you heard about business process re-engineering?
   Yes____ No____
   If yes, when did you hear? _____ (year)

2. Do you agree that "business process re-engineering", "process re-engineering" and "re-engineering" are the three different concepts?
   Yes____ No____
   If yes, which one you prefer to choose that really close your organisation practice? (please tick one)
   (a) Business process re-engineering
   (b) Process re-engineering
   (c) Re-engineering

3. Do you agree that "re-engineering" is close to meaning the same as "restructure" / "readjustment" / "reform"?
   Yes____ No____
   If no, which one you prefer to choose that really close your understanding? (please tick one)
   (a) Restructure
   (b) Readjustment
   (c) Reform

4. Do you agree that "re-engineering" range covers both internal and external sides of enterprise?
   Yes____ No____
   If no, which sides you will choose that really close your practice or planning?
   (a) Internal side
   (b) External side

5. Based on the definition given above or your understanding, what is the best way to describe the BPR? (Please tick as many that apply and rank from 1 most appropriate to 3 least appropriate)
   (a) Continuous total quality improvement (TQ)
   (b) Downsizing, restructuring or flattening the organisation
   (c) Making dramatic improvements to processes
   (d) Rebuilding or removing obsolete information system
   (e) Sharp focus on customer needs and how to meet them
   (f) Strategic rethinking to focus on core competencies
   (g) Others (please specify) _____

6. Is your organisation currently implementing a BPR project or have they completed a BPR project in the past?
   Yes____ No____
   If "yes" please complete section C, if "no" complete section D

Section C: This section asks what kind of reasons to impel some of organizations implement BPR.

1. What are the reason(s) driving your organisation to implement BPR? (Please tick all that apply and rank from 1 most important to 3 least important)
   (a) Extricate awkward predicament
   (b) Change business to gain competitive advantage
   (c) Opportunity offered by new technology
   (d) Develop organisation overall capability to accept a challenge
   (e) Achieve strategic readjust shifting business
   (f) Others (please specify) _____

2. There are three basis levels in re-engineering, which level has your enterprise reached? (please tick one)
   a) Process improvement
   b) Process re-engineering
   c) Business re-engineering

3. Does your organisation keep continuation to carry out BPR for future development?

   Yes____ No____ (Please go to section E)

   If yes, which aspects you will focus? (Please tick all that apply and rank from 1 most important to 3 least important)

   (a) IT investment
   (b) Staff training
   (c) Innovation
   (d) Marketing
   (e) Supply
   (f) Service
   (g) Others (please specify)

   If no, what approach you will implement for your future development? (Please tick all that apply and rank from 1 most appropriate to 3 least appropriate)

   (a) Business process management (BPM)
   (b) Knowledge management (KM)
   (c) Enterprise resources planning (ERP)
   (d) Customer relationship management (CRM)
   (e) Supply chain management (SCM)
   (f) Enterprise asset management (EAM)
   (g) Project management (PM)
   (h) Total quality management (TQM)
   (i) ISO's
   (j) Just in time (JTM)
   (k) Others (please specify)_____

Section D: This section searches for why some of organizations do not use BPR and what do they perform when their organisation change.

1. Please indicate the extent of the reason(s) that have discouraged your company from implementing BPR? (Please tick all that apply and rank from 1 most appropriate to 3 least appropriate)
   (a) This factor has strong influence
   (b) This factor has weak influence

(1) Too costly ____
(2) No support from top management ____
(3) Insufficient knowledge & inadequate project manage ____
(4) Too time consuming ____
(5) Organisational resistance ____
(6) Too risky ____
(7) No need for drastic change ____
(8) Lack of IT infrastructure ____
(9) Unclear strategic vision ____
(10) Others (please specify) _____ ____

2. Would you consider using BPR in the future?
   Yes____ No____
   If no, what the main reason to prevent you attempt?
   _____

3. What approach is your organisation applying currently? (Please tick all that apply and rank from 1 most appropriate to 3 least appropriate)
   (a) Restructuring (RS)
   (b) Total quality management (TQM)
   (c) Continuous improvement (CI)
   (d) Just in time (JIT)
   (e) Enterprise resources planning (ERP)
   (f) Knowledge management (KM)
   (g) ISO's
   (h) Enterprise asset management (EAM)
   (i) Others (please specify) _____ (Please continue)

Section E: This section combine with project focus, human issue and project measure three aspects. It is suitable for all of you to fill in the rest questions no matter what kind of method is used during your organisation change.

Project focus

1. What do you focus on when your organisation implement project? (Please tick all that apply and rank from 1 most important to 3 least important)
   (a) People
   (b) Process
   (c) Structure
   (d) Technology
   (e) Strategy
   (f) Others (please specify) _____

2. What are the main target(s) for you carry out project(s)? (Please tick all that apply and rank from 1 most appropriate to 3 least appropriate)
   (a) Reduction cost
   (b) Reduction cycle time
   (c) Reduction staff
   (d) Increase revenue
   (e) Increase productivity
   (f) Increase market share
   (g) Improve production quality
   (h) Improve customer service
   (i) Others (please specify) _____

3. As a manufacture firm, do you agree that your firm should spend a long time paying attention to production restructure and diversification?
   Yes____ No____
   If yes, what do you prefer to do? (Please tick all that apply and rank from 1 most appropriate to 3 least appropriate)
   (a) Exploit new production
   (b) Develop a series of production
   (c) Improve production quality
   (d) Add technology to production
   (e) Progress production design
   (f) Others (please specify) _____

   If no, what do you focus on? (Please tick all that apply and rank from 1 most appropriate to 3 least appropriate)
   (1) Increase market share
   (2) Improve production quality
   (3) Build brand
   (4) Seek for new market
   (5) Others (please specify) _____

4. Does your enterprise have a plan for technology reform and equipment renewing?
   Yes____ No____
   If yes, how long would this take?
   (a) 1-5 years
   (b) 5-10 years
   (c) 10-15 years

Human issue

5. Does your enterprise have any person or group of people to take charge whilst carrying out project?
   Yes____ No____

If yes, do you invite consultant?
Yes____ No____
If yes, how long the consultant joins the project? (please tick one)
(a) At beginning when the project start
(b) During middle section
(c) Until finish project

If no, how do you know your project make progress? (please tick one)
(1) We have an objective
(2) We have time limitation
(3) We have check system
(4) Others (please specify) _____

6. Does your enterprise widely affect employees' position during performance of project?
Yes____ No____
If yes, what do you ask them to do? (Please tick all that apply and rank from 1 most appropriate to 3 least appropriate)
(a) Dismiss some of them
(b) Recruit new staff
(c) Take training
(d) Management change position
(e) Some of staff shift job
(f) Others (please specify)

If no, (please choice yes or no as an answer)
(1) do they know your project? Yes____ No____
(2) do they join your project? Yes____ No____
(3) do they trend to positive attitude? Yes____ No____

7. Was any form of incentive used?
Yes____ No____
If yes, what form did it take? (Please tick all that apply and rank from 1 most important to 3 least important)
(a) Individual promotions
(b) Additional bonus
(c) Giving individuals opportunity to training
(d) Give group opportunity to training
(e) Others (please specify) _____

8. Do you think the workforce fully understood what project was all about?
Yes____ No____
If no, (please choice yes or no as an answer)
(a) do you tell them fully? Yes____ No____

(b) do they join your project? Yes____ No____
(c) do they gain any benefits? Yes____ No____
(d) do they face any risk? Yes____ No____

Project measure

9. What problems have you encountered when you carrying out project? (Please tick all that apply and rank from 1 most important to 3 least important)
    a) Lack of management support
    b) Family business resistance
    c) Lack of financial resources
    d) Lack of understanding from staff
    e) Lack of IT infrastructure
    f) Luck of cooperate with each other
    g) Underestimate risk
    h) Others (please specify) _____

10. Does your enterprise make cost accounting and summary?
    Yes____ No____
    If yes, how long they make?
    a) 3 months
    b) 6 months
    c) 1 year
    d) More than 1 year

11. Are your enterprise's processes continually improved and modified?
    Yes____ No____
    If yes, what is the motivation to impel you going ahead? (Please tick all that apply and rank from 1 most appropriate to 3 least appropriate)
    a) Profit
    b) Keep enterprise's image
    c) Learning process
    d) Others (please specify) _____

    If no, why your enterprise does not continue improvement? (please tick one)
    1) Give up project
    2) Finish project
    3) Start new project
    4) Others (please specify) _____

12. What results did you gain after carrying out project? (Please tick all that apply and rank from 1 get more benefit to 3 least benefit)
    a) To increase profits
    b) To reduce process time
    c) To reduce costs

d) To cut down the staff
e) To improve employee productivity
f) To improve production quality
g) To gain competitive advantage
h) To achieve dramatic change
i) Others (please specify) _____

Please make any comments on specific questions or issues in general
Comments:

_____

_____

The following information is not obligatory. If you could spend some of your valuable time, I am grateful to conduct a short follow up interview regarding your firm. I would appreciate it if you could leave contact details below.

Contact person's name: _____
Contact telephone number: _____
Email address (if applicable): _____

Thank you for your time and patience in completing this questionnaire. Your answers will be strictly confidential and anonymous. Once you have completed the questionnaire, please return to the person who gives you the paper.

If you would like to receive this survey results please tick ____

Appendix C

Huadian Television Factory Interview

A: interview with technology manager

Interviewer	Could you briefly introduce your factory? Is it still called a branch of a television manufacturing factory?
Interviewee	Now it is called a centre of electron information manufacturing.
Interviewer	When was the firm founded?
Interviewee	In 1986
Interviewer	How many employees were there at that time?
Interviewee	The factory was prosperous with more than 400 employees.
Interviewer	So it is a medium-size enterprise.
Interviewee	When we were at our peak the whole factory counted on our branch of the television factory.
Interviewer	So the factory is a state-own enterprise, and belongs to electrical manufacturing.
Interviewee	The major product is television.
Interviewer	Did you know of BPR theory?
Interviewee	Yes, I think so.
Interviewer	Did your enterprise implement BPR?
Interviewee	I do not think so.
Interviewer	So could you tell me how this enterprise carried out reform and which reform made a radical change and influenced the overall situation?
Interviewee	We started to reform in 1999. We set out to consider the colour television trade which at that time was in a general decline, on the other hand, in order to continue and maintain the status quo, the group of factory leaders thought that our branch of the factory needed to change the owner system, otherwise it would cause problems later on, because the state-owned system has a lot of abuses causing harm; for instance, the internal management is not suitable for enterprise coordination and it is only through private ownership that the problem will be solved. Meanwhile, our television factory leaders visited Haier enterprise. During that time Haier took over some enterprises and used "shock theory". The concept of this theory means that the management system is adequate but lacking in strong vitality, so they can carry out reform of owner system to impel the enterprise, struggling for existence, otherwise any reform could devastate it. In 1999, the group of factory leaders made an extreme attempt to introduce private owner system and contracted with one company to take over the television factory.
Interviewer	And then?

Interviewee Our leaders went through contract signature with one company to impel further life into that branch of the factory: "we cannot wait until die before carrying out reform", as we said to one company,

Interviewer Do you mean using a consultant?

Interviewee We put out a call for our factory to be leased, as our enterprise has a private owner system plus state-owned enterprise management concept. We thought that the idea was right. Owing to various conditional limits, the company which signed the lease did not achieve the object. Their management concept was different and they did not seize opportunities during the operation. They did not readjust prices during a market change; they adhered to a one-price system. As you know the colour television trade needs massive funding, as once the product is held in stock for a long period then this affects finances and leads to cash flow problems.

Interviewer It does.

Interviewee I think that the factory implementing reform was right, but during the actual operation many problems arose.

Interviewer What is the main problem?

Interviewee The management concept is a problem; it did not follow market changes doing the relevant adjustments, such as market price readjustment. The factory needs to make some immediate changes. The market resource gained changes and we should also make changes. You may have a fairly adequate management but you cannot keep old concepts without making changes. Nowadays we have shifted to a market economy.

Interviewer Why do they not follow market changes?

Interviewee The main operator considered that if the price dropped it would influence management results, although the factory was run by a contractor who still came under the framework of state-owned system operation. The big problem of state-owned enterprise is that a black and white television, for example, cost 1500 *Yuan* during that time, until now my account book still prices one at 1500 *Yuan*. If I sell them at 300 or 500 *Yuan*, then there is a big loss in the account book. On the other hand, they may also want to do better and did not realise that the colour television market declined so quickly in one or two months, decreasing by a big margin. The selling price should have been readjusted but unfortunately it was too late.

Interviewer Do you think that owing to government policy restrictions, the state-owned enterprise changed their management system and concept, which is a slow process?

Interviewee Yes, and it is very slow, for no matter what kind of reform it always relates to benefit redistribution. To be honest, nowadays the reform really impacts on employee profit. They stand in a position that they do not want to change.

Interviewer I think so.

Interviewee In a joint capital enterprise, there is a large wage gap between employee and manager but here we cannot do the same, otherwise the employee is unhappy and has little enthusiasm for work.

Interviewer Yes, they are emotionally upset.

Interviewee In recent years, the employee did not gain profits through reform, comparatively speaking, their profits were reduced and there was resentment. This situation change is big. During a planned economy period, the worker has a political position, and tends to receive a more equal treatment. Now, shifting to market economy, they lose what they had last time, so their concept still cannot adapt, so they need time to change their minds. Owing to their loss of profit, during reform they have complaints and make cynical remarks about reform.

Interviewer So how did you solve this problem?

Interviewee We tried to tell them what things happen nowadays. We compared different enterprises how they operate and how they are managed, what is the trend for reform, what situations they have to face, even compared with a foreign company etc. It is no use when their benefits are impacted, no one listens to your reason, they know what you say, they may know more than you, but they cannot accept.

Interviewer So you face the main problem that involves benefits redistribution. How about other departments?

Interviewee Each department also exists with this problem, and now many departments change to grassroots management. They have more power to make independent decisions. However, each department has different problems and the main problem is still profits. People felt shy to discuss this problem last time but now everyone pays attention to this problem; for example, when you recruit workers, their first question is about earnings.

Interviewer As a leader, how can you increase enterprise's profit?

Interviewee From our branch of the factory, I have currently to consider so many employees' survival, so if we want fundamentally to change to extricate ourselves from an awkward predicament it is necessary to reform the owner system. If we still use the current owner system we cannot change.

Interviewer What is the current owner system?

Interviewee We are still a branch of the Huadian electric group and are second level of corporate, so our finance is still controlled by the top head factory, although we have more freedom and independence than before. As you know if our finance is controlled, we cannot take action immediately without reporting to head office. Why I asked you to wait just now was that I have to see the superior to report where we can go with our enterprise. Currently we have nearly 100

employees and I have to make appropriate arrangements for them, but we do not have the capability by ourselves.

Interviewer Why?

Interviewee The head factory invested massive funds during the change of owner system in 1999, but we did not gain good results, so the head factory will not invest any more, as firstly our products are on the decline and secondly our enterprise made profits before 1997. The head factory also dislikes poor enterprise, and if I were director of the head factory I also would not invest.

Interviewer I can understand.

Interviewee Now they ask me to use original resource and intrinsic assets to carry out operations, in order to support these employees, but meanwhile the head factory also gives an appropriate subsidy. However, this is a temporary expedient, they cannot always give a subsidy to us, and also our raw material is limited, the head factory just gave me a period of time for transition-and, as a result, we need initiative reform, so I can report that I gained business for one company, that makes products for safety and guard.

Interviewer What is meaning of safety and guard products?

Interviewee For example, when you come to my house, you make a call; I will open the door for you, because I see you in the monitor.

Interviewer It also belongs to the electrical trade?

Interviewee Yes, we are the same trade; they need to export, which involves product inspection by government but their environment is not good enough, so I discussed this with the owner and invited him to come to our factory. I rented the workshop to him and he recruited some of our employees. Together we operated his enterprise, a state-owned enterprise which had a complete TQM system, and it was easy to pass product inspection; also our employee quality is good compared with that of some private enterprises. Once I rebuilt the workshop, we could cooperate with each other, they are a mature enterprise, so we neither of us need to start at the beginning and both are able to give full play to our professional skill.

Interviewer Do you consider there is any risk?

Interviewee I do not think we have any risk, because firstly our workshop and instruments lie idle if we do not rent them; and secondly our employees are not busy; thirdly his enterprise brings funds to us, the main benefit is that they can use our employees, for we cannot send employees into the society when we carry out reform, and we have to think about them first. We have many chances to cooperate with universities, which have great potential in the market product; however they do not care about the employee, and might just use a few of our employees, so I cannot get rid of them like a machine. On the other hand, we re-engineer our enterprise and that also has some

risks: how do we develop markets? What about cash flow? etc? I think a dominant position tends to be more evident.

Interviewer So what does the head factory think about it; did it restrict you?

Interviewee They do not care as long as you can make this enterprise survive.

Interviewer From your management experience, could you discuss how SMEs leaders improve their management capabilities, this topic may digress from the above point, as we know. SMEs leader are the core of enterprise and their concept impacts on the enterprise's further development direction. From this point of view, could you give more details of how they improve, such as by undertaking training or regular studies?

Interviewee This topic is broad; from my point of view, study is a necessary approach. We need to learn management concepts from foreign countries, also learning from other enterprises but we must integrate our feature to learn. Some management concepts may suit other enterprises but we cannot adopt these. We learn some things by always focusing on practice. The group of enterprise leaders lays stress on training middle level managers; we have certain training courses every year, and they invite different experts to give speeches during a training course. Secondly, they also subscribe to management journals for us. Nowadays we gain more information from the Internet, but, on the other hand, we also learn from our customers. Some private owners have new ideas of doing business and, through talking with them, we might gain some useful information or different management concepts, which have served as a great source of inspiration to us.

Interviewer What do you think of the dialectical relationship between IT and SMEs reform? Do you think that IT promotes enterprise reform?

Interviewee I think that IT is really important to our factory, our products relate with IT and product development could apply it.

Interviewer What about management?

Interviewee The management also need IT; we have regional Internet in the group of enterprises, when we come every morning, we turn on the computer to check whether we have a meeting or not, the market information and IT information is transmitted by Internet. Nowadays we cannot go into the market to survey the price, quality, and pattern of products, but use only the Internet to gain the information. Based on this information, we synthesise analyse, and then provide a reasonable price that can be adopted by both; for example, if the tube cut price from Change Hong, we also consider reduction, as if we still maintain the old price we may die immediately, so we learn a bitter lesson, that IT and SMEs development are in fact vitally interrelated. I cannot contact my daughter without the Internet; it is as easy as and cheaper than the telephone.

Interviewer Could you use your factory as an example to discuss radically what are the dialectical relationship between radical reform and continuous reform?

Interviewee I think that reform cannot radically change; we have a bitter experience over the change of ownership in 1999.

Interviewer Is it a big turning point for your factory?

Interviewee It is a bad time for our factory. I advocated reform step by step, even including our country implementing reform; there are problems influencing reform results, such as: people's conception cannot follow development requirement or ignore enterprise stability; the environments influence each other, so if you go too far without other enterprises, you find yourselves in an isolated position. Why we failed reform in changed owner system in 1999 was that the idea was all right, and the top leader also supported it, but because we overstepped, we could not make any changes to the management team during the reform.

Interviewer Of course.

Interviewee I think that the reform needs to be step by step, and consider the real situation. When the organisation carries out reform top management need to solicit opinions from all quarters and take care with the employees, who are more clever than the manager, sometimes, they know the problems more clearly and in detail, so the top factory based its research on the actual situation and listened to all useful opinions before carrying out reform.

Interviewer Could you stand in a Chinese culture viewpoint and just focus on culture of Confucianism in "harmony" and "middle course" aspects to discuss how they influence your enterprise reform? For example, you just mentioned gradual change and reform step by step; is it also influenced by the culture of society background?

Interviewee Yes, it is really impacted by society culture, what I did and what I discussed was gradual reform, which is part of the Confucianism culture expression. We cannot fiercely change if doing something oversteps concept and understanding, it cannot achieve the objective, so maybe it is a good thing that we can spend more time in doing things separately, then we can gain an effect.

Interviewer How do you think the culture of Confucianism promotes enterprise reform or hinders them?

Interviewee It just depends in what situation the enterprise finds itself, if the enterprise rapidly develops then they cannot consider more about "middle course" otherwise they cannot achieve the goal; however, when the enterprise has a stable development it needs "harmony" to straighten out relations between various sectors. Each stage has different conditions, so the culture of Confucianism may support the enterprise reform in this stage and may hinder radical change in

another stage.

Interviewer How do you think that enterprise culture emphasises loyalty and does it influence enterprise reform?

Interviewee I do not think that will impact enterprise reform, I think if employees have high loyalty to the enterprise then it is a really good environmental atmosphere for them to develop, actually employees do not care about the factory development trend; as they do not have high participation aspirations, they pay more attention to their profits. If we pay you 1000 *Yuan*, and the other enterprise pays you 1500 *Yuan*, you may leave right away, so only high loyalty will impel enterprise reform, and if everyone considers how they can develop our factory then something will be changed, but actually we do not think like that, everyone has their own idea, it difficult to coordinate actions.

Interviewer It may cause leader confusion.

Interviewee They take care of things that are vitally interrelated to them, such as housing reform and medical reform.

Interviewer Could you provide more detail about reform owner system in 1999?

Interviewee I left here during that time, for the reform also impacted on me; we have positive and negative lessons.

Interviewer Could you talk about the more positive aspect?

Interviewee I think the concept of reform is right; it goes in advance. We learnt from Haier development report that they are classified as a state-owned enterprise. Some firms go bankrupt, some still can be saved, they use "shock theory" to reform these enterprises. In a lesson learnt from negative experience, they did not control opportunity and did not follow the price and market change. There are various kinds of reasons.

Interviewer Any more details?

Interviewee These are the main aspects.

Interviewer Who is the person in charge in here?

Interviewee I do not want to discuss it any more; it is a process of reform.

Interviewer Sorry about that and thank you very much for your time.

Summary interview

Strategy change failure: reason
1. Concept did not change
2. Seeking leader achievement
3. Did not follow market
4. Price change slow

Approach solving
1. To keep continuous reform
2. To change owner system again
3. To arrange employee job

Leader improvement:
1. Training
2. Journal
3. Internet
4. Dealing with customer

Chinese culture ⟶ To separate effect in both promotion and hindrance.

Enterprise culture ⟶ To support enterprise development.